

R.T. Gould del.

Ioannes à Doetecum inv. circa 1583

CAMBRIDGE UNIVERSITY PRESS

LONDON: BENTLEY HOUSE, N.W. 1
NEW YORK: 32 EAST 57TH STREET, 22

Ten Shillings and Sixpence net
(U.S.A. \$1.75)

THE SOCIETY FOR NAUTICAL RESEARCH

FOUNDED 1910

To encourage research into nautical antiquities, into matters relating to seafaring and shipbuilding in all ages and among all nations, into the language and customs of the sea, and into other subjects of nautical interest.

The Society has erected a Monument to the Van de Veldes in St James's, Piccadilly, London; raised £107,000 to save Nelson's Flagship and has superintended the restoration of H.M.S. *VICTORY* to her appearance as at the Battle of Trafalgar; paved the way to the establishment of the National Maritime Museum at Greenwich and the *Victory* Museum at Portsmouth; organized exhibitions of Nelson relics and naval prints, etc.; and issued several periodical publications dealing with nautical archaeology, besides an inexpensive set of official plans (ten in number) for building a model of H.M.S. *Victory*.

The annual subscription of 30 shillings (\$4.30) entitles a member to receive *The Mariner's Mirror* and the Annual Report and to attend the Annual Meetings and the Annual Lectures.

For particulars of membership apply to

THE HON. SECRETARY, SOCIETY FOR NAUTICAL RESEARCH,
NATIONAL MARITIME MUSEUM, GREENWICH, S.E. 10

CONTRIBUTIONS TO *THE MARINER'S MIRROR*

The aim of the Society being to arrive at true conclusions through free discussion, it is distinctly to be understood that the Editor is not held responsible for statements made in the *Journal*.

Contributions and correspondence should be addressed to G. R. G. WORCESTER, ESQ., *Penny Cottage, Pound Lane, Windlesham, Surrey*. All articles, notes, queries, answers and reviews of books should be typed, on one side of the paper, preferably quarto, with double-spacing and with a wide margin. The name and address of the author must be given on the last page. As a general rule, the length of an article should not exceed 10,000 words and, owing to the high costs of production, photographs and line drawings to illustrate contributions must be restricted to a minimum.

Names of ships should be underlined to denote *italics*, and not written within inverted commas.

THE MARINER'S MIRROR MAY BE OBTAINED FROM

LONDON: *Cambridge University Press*, BENTLEY HOUSE, N.W. 1;

Price 42s. per volume (postage 1s. 8d.); single parts 10s. 6d. (postage 5d.)

NEW YORK: *Cambridge University Press, American Branch*, 32 EAST 57TH STREET, 22;

Price \$7.00 per volume, postage extra

SALE OF BACK NUMBERS

The Mariner's Mirror was published monthly from January 1911 to September 1914, and from July 1919 to December 1923. It has been published quarterly since January 1924. Single copies of the monthly issues, Vols. I to IX, will be sold at 5s. each, and the quarterly issues,

M. BERNARD

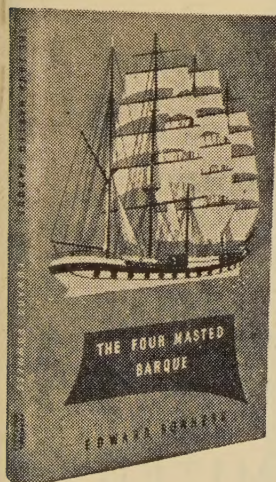
21 RYDER STREET, ST JAMES'S, LONDON, S.W. 1
WHITEHALL 6894

FINE ART DEALER
IN PAINTINGS
DRAWINGS AND
ENGRAVINGS

PICTURES FRAMED
AND RESTORED
VALUATIONS
FOR ALL PURPOSES

I HAVE ALWAYS ON VIEW A FINE SELECTION OF MARINE
PAINTINGS AND DRAWINGS OF ALL SCHOOLS OF
THE 17TH, 18TH AND 19TH CENTURIES

A BROCHURE ILLUSTRATING 50 PAINTINGS FROM MY
COMPREHENSIVE STOCK, ALL BY DIFFERENT ARTISTS,
WILL BE SENT POST FREE ON REQUEST



The Four-Masted Barque

by EDWARD BOWNESS, A.I.N.A.

An amplification of the author's previous successful work *Modeling the Archibald Russell*. The four-masted barque, as a type, has been most carefully analysed and the many variations in form and rig are described and illustrated. Practically any known four-masted barque can be accurately modelled from this new book.

128 pages · 44 photo plates · 85 diagrams · 3 folded plans

From your bookseller 9s. 6d. or 10s. 2d. post paid from

Percival Marshall & Co. Ltd.

19-20 NOEL STREET, LONDON, W. 1

Some Press Comments

The author's attention to minute details will make this book a welcome addition to the reference shelf.

NAUTICAL RESEARCH JOURNAL, U.S.A.

The valuable counsel of a master of the craft.—YACHTSMAN

The whole work has been written and compiled by an expert and enthusiast.—SHIPBUILDING AND SHIPPING RECORD

For all sailing ship lovers.—P.L.A. MONTHLY

Mr Bowness and others who foster interest in an absorbing hobby deserve praise and encouragement.

JOURNAL OF THE HON. COMPANY OF MASTER MARINERS

PAINTINGS, DRAWINGS, PRINTS

by the

OLD & MODERN MASTERS

P. & D. COLNAGHI & CO., LTD.

(ESTABLISHED 1760)

Galleries

14 OLD BOND STREET, LONDON, W. 1

Telegrams: "COLNAGHI, PICCY LONDON"

Telephone: REGENT, 1943-4

Books on Maritime History

INCLUDING

VOYAGES AND TRAVELS, SHIPBUILDING
NAVAL AND MERCANTILE HISTORY
CLIPPER SHIP ERA, SHIP MODELS, PIRACY
ETC.

Specialists in this subject for 100 years. We are always
interested in purchasing books of this nature.

FRANCIS EDWARDS, LIMITED

83 MARYLEBONE HIGH STREET, LONDON, W. 1

WELbeck 9221

By Appointment



to the late
King George VI

PICTURE DEALERS
**THE
PARKER GALLERY**

FOUNDED 1750

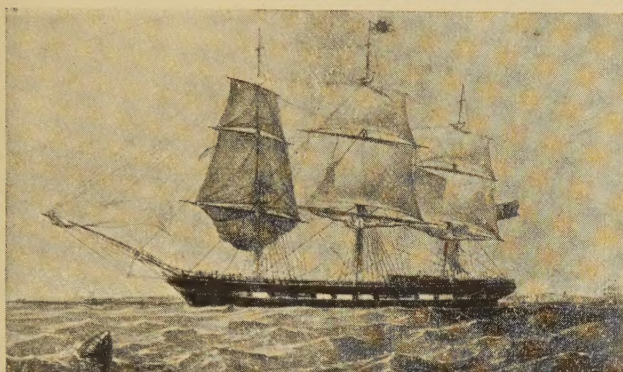
**2 ALBEMARLE STREET
LONDON - W.1**

The Oldest Established Firm of Picture and Print Dealers

By Appointment



to the late
Queen Mary



The Blackwaller *Windsor Castle* leaving Bombay 1859

SPECIALISTS IN OLD PRINTS
AND PAINTINGS OF
MARITIME
MILITARY
TOPOGRAPHICAL &
SPORTING SUBJECTS

OLD MAPS
OLD SHIP MODELS

CATALOGUES AVAILABLE

PHONE :
GROSVENOR 5906-7

MAGGS BROS.

LIMITED

**50 BERKELEY SQUARE
LONDON, W.1**

Books and Autographs

A speciality of books
relating to Voyages and Travels,
Shipping and Naval History,
old Decorative Maps, etc.

Recent catalogues include:

827. GENERAL VOYAGES & TRAVELS


In preparation

AUSTRALIA AND PACIFIC

Bound copies of Vol. 3, with full Indices

A few copies are available at £2. 2s.
also the Indices separately at 12s. 6d.

Catalogues on other subjects issued regularly



Digitized by the Internet Archive
in 2024

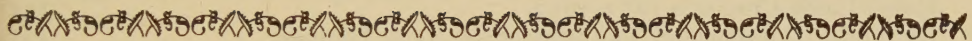
The MARINER'S MIRROR

WHEREIN MAY BE DISCOVERED HIS
ART, CRAFT & MYSTERY

*after the manner of their
use in all ages and
among all
Nations*
❧

VOL. 42. No. 2

MAY 1956



CONTENTS

ANNUAL LECTURE	PAGE
<i>By Alan Villiers, D.S.C.</i>	91

ARTICLES

ABRAHAM PARSONS: MARINER AND MERCHANT. <i>By J. W. Damer Powell</i>	94
SMALL CRAFT IN THE RIJKSMUSEUM VOOR VOLKENKUNDE, LEIDEN. <i>By H. H. Frese</i>	101
CHRISTOPHER GUNMAN AND THE WRECK OF THE GLOUCESTER. <i>By P. M. Cowburn</i>	113
THE ORIGIN AND OBSERVANCE OF THE DRAGON BOAT FESTIVAL IN CHINA. <i>By G. R. G. Worcester</i>	127
GREAT BRITAIN AND THE GROWTH OF THE RUSSIAN NAVY IN THE EIGHTEENTH CENTURY. <i>By M. S. Anderson</i>	132

NOTES

The Rig of Early Medieval Warships—Further Note on the Syrian Schooners—Knots per Hour—Method of Planking Nelson's Ships—Sailors' Baptism—Maritime Activity in a South Cardiganshire Village—The Lateen Sail—Paddle-Wheel Craft of China's Rivers—Note on Contemporary Sailing Craft in the Eastern Mediterranean—Seven Years upon the Snares—Old Naval Gun Carriages 1581—Nautical Research in Scandinavia—The Isles of Scilly Gigs—Lancaster of the East Indies 1592 and 1600	147
---	-----

QUERIES

- Bouncing Cannon Balls—'Royal Navy, Retired'—John Henderson—Jet Propulsion—Unanswered Queries—Early Aegean Craft . . . 165

ANSWERS

- Splice the Main Brace—Sack Ship—Ship *Lintin*—Cutter-brig—Belly and Foot . . . 166

REVIEWS

- The Whaling Journal of Captain W. B. Rhodes 1836–1838: in the Barque *Australian* of Sydney . . . 167
 Chepstow Ships . . . 167
 Orwell Estuary . . . 167
 Carl Roos: Prisonen. Danske og norske krigsfanger i England 1807–1814 . . . 168
 Seventeenth-Century Riggig. A Handbook for Model-Makers . . . 169
 Union-Castle Chronicle 1853–1953 . . . 171
 Up funnel, Down Screw! The Story of the Naval Engineer . . . 171
 De Schepen bij Pieter Bruegel de Oude. . . . 172
 Marista Terminaro 173
 Shipwreck and Empire. Being an Account of Portuguese Maritime Disasters in a Century of Decline . . . 173
 The Four-Masted Barque 175
 Pharaoh to Farouk 176

PLATE

1. Personal ship of the Sultan of Rhiow . . . *Facing page* 102
 2. Sampan Gebing, Labuan Ruku, Sumatra . . . 102

CORRECTIONS

RIG IN NORTHERN EUROPE

M.M. Feb. 1956

1. p. 15. *For* Dr Edward Browne *read* Dr Thomas B. There was a Dr Edward Browne who served in the Navy and kept an imperfect journal of a voyage from Madras to the Cape of Good Hope, 1691–2. (Brit. Mus. MSS. Sloane, 1689.)
2. Fig. 2 should not show lifts: author's ignorance.

THE SOCIETY'S ANNUAL LECTURE

THE Annual Lecture for 1955, of the Society, was given by Mr Alan Villiers, D.S.C., to an audience of about 120 members and friends. The Director of the National Maritime Museum kindly offered the Society the hospitality of the Museum's Lecture Theatre, and afterwards the Society entertained its guests to tea in the Museum Restaurant. Mr Villiers showed first a colour-film of a voyage from Lisbon to Portsmouth in the smart modern yacht of His Excellency the Portuguese Ambassador, Dr P. T. Pereira, who attended the meeting as the guest of the Society.

Mr Villiers next showed a colour-film, which he had photographed on the fishing beaches of Portugal, in three main sections. First to be shown were the beaches on the west coast, north of Lisbon, including Nazare, Buarcos, Mira, Vieira de Leiria, Costa Nova (near Ilhavo), Viana do Castelo, and as far as Moledo de Minho. The films showed beach craft of all sorts being launched, recovered and fished. Mr Villiers explained that Portugal to-day had a large fleet of modern trawlers and, indeed, sent the most modern fleet, both of trawlers and hand-line fishermen (using dories), to the Grand Banks of Newfoundland and off Greenland. This fleet included forty-five hand-liners, which were fishing more efficiently as the trawlable grounds were becoming steadily more and more denuded of their better fish, and there was a living tradition of sail in this fleet. Some of the more modern fishing vessels were small motor-ships, of up to a thousand tons; and the film showed the launching—or rather, floating, as she was built in a dry dock—of one of these, named the *Alan Villiers*, at Viana do Castelo. But it was the old-type fishing which Mr Villiers had set out to record—the picturesque little shoe-like vessels with their high prows and their gay colours, from Nazare, and the big beamy beach fishermen of the *Artes de Grande Chavega*, which still operated from beaches such as Furadouro, Costa Nova, Torreira, and Leirosa, among others.

After showing the smaller fishing vessels, the film took the audience aboard one of the impressive *barcos do mar*, rowed by forty-eight men and launched perilously through the Atlantic surf, to run out (under sweeps alone, each sweep a pine tree, roughly shaped) for miles, to drop a big net, well off-shore. Then the *barco* returned to its launching beach, and teams of oxen began the laborious business of hauling the net in again, across the bottom. The oxen strained at their task for hours, while the fishermen prepared their high-prowed boat to go out again, making five

'casts' a day whenever weather permitted. It was observable in these pictures that the fishing was not very good, and Mr Villiers said that, because of improved methods offshore, these inshore fisheries were showing some evidence of declining.

The film showed that this type of beach-fishing vessel was extremely picturesque and very stoutly built. The scene then shifted to the south of Portugal, to the beaches of the Algarve, with a look at the house of Vasco da Gama at Sines, on the way, and a call at the little fishing port of that lovely bay. At Albufeira and at Quarteira, in the Algarve, the film showed the lateen-rigged fishing vessels being launched by night and returning at dawn, and fishing about ten miles off-shore. It was observable that there was not an internal combustion engine among the fleet of some sixty vessels operating from Albufeira.

The next section of the film dealt with the tunny fisheries off Cabo Santa Maria, by Faro, in the Algarve. Here Mr Villiers said that he had spent about a month, at the time when the tunny are migrating into the Mediterranean in order to spawn. From time immemorial—certainly the tunny fisheries there were of importance during the time of Prince Henry the Navigator—complicated traps have been put down in the sea in selected places to intercept the tunny. They pass by the coast of the Algarve, inward bound, in May and June, and out again, bound for the open Atlantic, in July and August. When inward bound they are fat and tremendously healthy fish, in the prime of condition, and that is when the greatest efforts are made to take them. A series of traps, about eight miles in length, in the shape of a somewhat flattened letter L, is put down in the sea, always in the same place. This trap is so arranged that, met anywhere, it will lead the tunny into the 'corral'—the trapping chamber—at the point of the L. The tunny, intent on spawning, is afraid of shadows and of anything in the water. Therefore, when it meets the trap it turns, to swim away, but the trap is so planned that, once met, its pockets and turns prevent the tunny from getting away, unless it turns back which, apparently, it will not do. The killer whale, called 'roaz' by the tunny fishermen, is its greatest enemy.

One peculiarity about the migrations is that they appear to be led by large flying-fish, and the film showed several parties of these, on different occasions, being caught in the traps at the head of large schools of 400 to 600 lb. tunny. This was the more curious in that tunny ordinarily eat flying-fish, but there was never anything inside the stomachs of the tunny taken off the Algarve. It would appear, said Mr Villiers, that for some reason known only to themselves, the flying-fish acted as the tunny pilots.

The film showed the whole of the operation when a school of tunny had been observed in the traps, from the first sighting to the final capture in the blood-stained 'corral', where brawny fishermen, armed only with steel hooks to hook the tunny into the waiting launches, hauled them out. The corral surface was white with the foam lashed up by the frantic tunny, whose misfortune it was that its body was so valuable a source of food. Mr Villiers said that there were 400,000 square metres of net in the trap off Cabo Santa Maria, and the equipment necessary to lay it and use it included over 600 large Bower anchors, twenty-two boats of varying sizes, and 22,000 cork floats. The company of tunnymen at this trap consisted of 144 men, of whom 136 were fishermen. The most experienced was the Master of the Nets, in charge of the fishery, and under him were three 'idlers'—so called because their main duty was to watch for the tunny, which were extremely difficult to see from above—and one clerk, who kept the accounts, which were on an ancient system.

The whole film provided an excellent documentary of interesting and picturesque fishing methods, and was enlivened by the photographer's commentary as it proceeded. At least one of his audience was left wondering where he had found so much as a foothold in the busy, crowded boats. Mr Villiers gave us a memorable afternoon, for which much thanks. He is both a Vice-President of the Society and the Chairman of the Photographic Sub-Committee which collects photographs for the Museum collection. This lecture was designed to give members and friends some idea of the valuable work being done by Mr Villiers and others in gathering photographic records of interesting maritime activities, at home and abroad, especially of those which are likely soon to pass away.

G. R. G. WORCESTER

Amongst those present were:

Mr and Mrs R. C. Anderson, Mr A. J. Barnes, Mr Reginald Becket, Captain C. K. Blake, Mr Edward Bowness, Professor J. G. Bullocke, Mr F. G. G. Carr, Mr H. Gresham Carr, Mr T. E. Cresswell, Mr A. P. Dalby, Mr R. de Bunsen, Mr C. B. Dicksee, Captain A. L. Fletcher, R.N., Mr W. C. Fox, Mr D. C. Harben, Mr W. L. S. Harrison, Engineer-Commander H. O. Hill, R.N., Mr A. J. Hughes, Engineer-Rear-Admiral R. C. Hugill, Instructor-Captain T. E. Jackson, R.N., Brigadier H. A. Joly de Lotbiniere, Mr Philip Kershaw, Mr and Mrs Basil Lavis, Professor Michael Lewis, Mr and Mrs J. N. C. Lewis, Professor C. C. Lloyd, Mr R. Lowen, Mr Norman Macleod, Mr Frank B. Maggs, Mr and Mrs John Maggs, Mr W. O. B. Mayer, Commander R. D. Merriman, R.I.N., Commander K. Michell, R.N., Mr D. I. Moor, Mr John Munday, Mr G. W. Munro, Captain and Mrs F. C. P. Naish, Lieutenant-Commander and Mrs G. P. B. Naish, Mr Norman Ough, Mr C. E. Parkes, Mr F. J. Pateman, Mr Charles Peirson, Lieutenant-Commander and Mrs A. H. Phillipson, Mr E. A. Philp, Mr N. H. Poole, Mr P. A. Rumbelow, Mr A. Smith, Mrs Mona Stuart, Captain Geoffrey Thorne, R.N.R., Mr A. L. Tucker, Commander Harry Vandervell, R.N.V.R., Mr Otto Veil, Lieutenant-Commander A. H. Waite, Miss Helen Wallis, Mr E. A. Woods, Mr G. R. G. Worcester.

ABRAHAM PARSONS: MARINER AND MERCHANT

By J. W. Damer Powell

ABRAHAM PARSONS was a mariner and traveller, who had been 'originally bred to the navy, in which his father was a captain', and in 1756 commanded the *Sally* of Bristol, letter of marque. He afterwards retired from the sea to carry on business as a merchant and shipowner in Bristol, but this, 'not being attended with the desired success, after some years, he was obliged to relinquish'. In 1767 the Levant Company appointed Parsons Consul and Factor-Marine at Scanderoon, now Alexandretta in Syria, and in 1771 he entertained General Sir Eyre Coote, the captor of Pondicherri, then returning home by the Overland Route from India. Two years later, however, Parsons was obliged, from the unhealthiness of the country, to resign, when he commenced a voyage of commercial speculation. An account of his travels, which include a journey from Aleppo to Bagdad and Basra by the Overland Route, and a passage from Bushire to Bombay in H.M.S. *Seahorse*, in which ship Nelson was then serving as an able seaman, was published in 1808. This book¹ proves the writer to have been a man of wide scientific interests, as, besides descriptions of places visited, he gave measurements of ruined buildings and many astronomical and meteorological observations; two sketches from his pencil of Antioch and Bagdad are also reproduced.

Parsons set out from Aleppo on 14 March 1774, with three companions and a caravan of 800 camels for Bagdad, a distance of about 900 miles, which was reached on 7 May, after a journey of 54 days. During his stay in the city Parsons took a series of tidal observations of the River Tigris and, on 18 September, visited the ruins of the Tower of Babel and 'employed himself in drawing four designs of them'.

Leaving Bagdad on 29 October, Parsons arrived at Hilla on the Euphrates two days later, where he hired a vessel of 60 tons for passage down the river to Bussora (the present Basra), and arrived at Qurna, where the Tigris and Euphrates unite to form the Shatt-el-Arab, on 10 November. The party arrived at Basra the following day where they were welcomed at

¹ *Travels in Asia and Africa; including a Journey from Scanderoon to Aleppo, and over the Desert to Bagdad and Bussora; a Voyage from Bussora to Bombay, and along the Western Coast of India; a Voyage from Bombay to Mocha and Suez in the Red Sea; and a Voyage from Suez to Cairo and Rosetta in Egypt.* London, 1808.

the British Factory¹ by Henry Moore, Agent for the East India Company. Three vessels of the Bombay Marine were then in port: the *Revenge* frigate, 26 guns; *Eagle* snow, 16, and *Success* ketch, 14; 'besides two other ketches of 14 guns each, built at Bombay for the Pasha of Bagdad. They are commanded by an English midshipman, in the Company's service, and have on board a few English sailors, the remainder of the crew are Turks; they carry British colours.'

While Parsons was at Basra a war broke out between Persia and Turkey, and on 15 January 1775 news was received that a Persian army of 50,000 men, commanded by Sadiq Khan, brother of the Shah, Kerim Khan, had left Shiraz to undertake the capture of the city. Basra, situated on a creek about two miles from the right bank of the Shatt-el-Arab, was at this time surrounded by a deep and broad ditch into which the water was introduced at high tide and retained by gates. The mud walls, 'from twenty to twenty-five feet thick, with parapet walls breast high', having 'small embrasures for musquetry or arrows, the Arabs being good archers', were twelve miles in circuit. They not only encircled 'the city on the side of the land, but likewise on those of the creek, the entrance of which is at a considerable distance, where the walls terminate on both sides; each extremity being defended by fortification and a gate, which are three miles distant from the town. In the intermediate space are many thousands of date and other trees, mixed with rice grounds.' There were four gates, a sally port and eight bastions, each mounted with eight brass twelve-pounders, besides upwards of 50 brass six and nine-pounders mounted on the walls.

There was also a battery of twelve brass guns about 100 yards below the creek's mouth. The population was then about 85,000 with a small Turkish garrison of 1500 men, but the Governor was 'not only very brave, but active and vigilant, and is almost the whole day on horseback, overseeing the repairing of the walls, gun carriages and mounting the artillery, but, unfortunately, he is not heartily seconded by his officers'.

On 17 March news was received that an army of 15,000 Arabs, allies of the Turks, stationed about 60 miles above Basra to oppose the enemy's passage of the river, had deserted and it was soon afterwards reported that 'the Persian army was leisurely wafting itself over the river, on blown goat skins, having no enemy to obstruct them'. Parsons was, however, hopeful that the Company's vessels were 'sufficient to hinder any reinforcement or provisions being sent from Persia by water, without which their army cannot long subsist, as the neighbourhood cannot supply them'. On the 21st, at 3 a.m., 'we were alarmed at the firing of cannon on the river, which

1 First established in 1640, but not permanently until 1730-40.

continued for a considerable time, and an hour after an express arrived with the unwelcome news, that fourteen of the Shaub's galliots had pushed up the river, unseen by our cruisers until too late'. The 'Shaub' was a piratical chief, who, usually at enmity with the Persians, had been prevailed upon to take their side in the hope of sharing in the plunder of the city. He was soon able to provide craft for transporting guns, tents and horses over the river under the protection of batteries erected by the Persians on its banks.

On 22 March the Agent went on board the *Eagle*,¹ which ship had already received the treasure and valuables from the British Factory. The *Success* and one of the ketches, which had been sent after the galliotes, returned from their pursuit, the former having taken one, which was burnt, and damaged others before they reached the Persian camp, 60 miles from Basra. On the following day two emissaries arrived from the enemy and demanded from the Turkish governor twenty lacs of rupees for the ransom of the city, with the threat that, if refused, it would be taken by storm within five days from the arrival of the army. They also visited the British Factory to see Mr Moore, who was then on board the *Eagle*, but he 'immediately came on shore, and presented each of them with a vest and turban'. The messengers were then sent back without an answer.

As there was a probability that the Persian fleet would attempt to run up the river to the assistance of their army, a feat which stood a good chance of success on a dark night with a fair wind and flood tide, in spite of the vigilance of the Company's vessels, Parsons submitted a plan to the Agent that a number of boats should be moored across the river to form a barricade. This was approved and an iron chain of about 70 fathoms was hauled across the river with boats made fast to it and anchored at intervals of about 60 feet. This was completed on the 25th, and the next day Parsons dined with the Agent in the *Success*, afterwards going on board the *Eagle*, the two ketches, and a galliot taken by the *Eagle*; the prize was '84 feet long, 24 feet broad, mounts 10 carriage guns, six-pounders, and is built forward like a London wherry, with a pink or lute stern, and has only one tall mast, which rakes forward, to which is attached a lug sail; she carries 24 oars. This evening by order of the Agent, she was set on fire and burnt, in doing which, an officer of the *Success* was so terribly burnt by some mismanagement in setting fire to the train of powder, that it is feared he will not recover.'

Early on 6 April the Persian army appeared in sight and two hours later the Agent left the Factory and went on board the *Eagle*. The first

1 The *Revenge* had apparently sailed from Basra.

blood was drawn the next day when four Persian horsemen who had ventured too close to the walls were surprised and killed by about a dozen Turks who let themselves down from one of the bastions. On the morning of the 8th, 'sixteen Persian galliotes appeared in sight, coming up the river with a fair wind and full sails, to attack our ships. The galliotes continued their course up the river until three this afternoon, at which time they were about a league distant from our ships, when our commanders slipped their cables, and the *Eagle* and *Success*, with the Pasha's two ketches, pursued with crowded sail; upon which the Persians immediately made off, and as there was but little wind, by the assistance of their oars, as well as sails, they escaped. Their fleet consisted of a brig called the *Tiger*, which they took from the Company about two years since, five galliotes of ten guns each, and ten others from six to eight guns each.' Early on 9 April the Persians unexpectedly assaulted the walls in five different places, 'though it was so exceedingly dark that neither moon nor star was to be seen'. Parsons, with the rest of the English party, at once made for the creek's mouth where they embarked on board the *Eagle*. At dawn it was found that the attack had failed and that the Persians had been repulsed with a loss of about 120 killed. The Turkish killed and wounded did not amount to thirty. On the next day the Persians succeeded in setting fire to the barricade of boats, and at noon on the 11th it was known that the Persian fleet was not far away. The *Eagle*, with the Agent on board, *Success*, in which ship Parsons was acting as lieutenant in place of the officer who had been severely burnt on 26 March, and four Turkish vessels, hove up and worked down the river with an ebb tide and contrary wind. Three hours later the Persian fleet of twelve galliotes and thirteen armed boats were seen at anchor. As soon as the allied flotilla approached they weighed and the galliotes drew up in line of battle.

At four the Persian admiral fired a shot at the *Eagle*, which we found was a signal for the rest to begin cannonading, all directed against the *Eagle* and *Success*. At half past four the *Eagle* returned their fire with a broadside, followed by the *Success*. As soon as we arrived within gun-shot, the Persians kept driving through the narrow reach, with the ebb tide and contrary wind, continuing to fire at us, which the *Eagle* and *Success* returned, whenever the guns could be brought to bear on them on the different tacks. Presently we received a shot through our jib, another through our ensign, and another through a spare topmast on the booms. The Pasha's ketches and galliotes could not keep up with us, and the two former got twice aground. The cannonading on both sides continued briskly, as we never could get near enough to do any execution with our musquetry. At half past five we had our main-topgallant yard arm shot away, much of our rigging cut, and two of our gun ports in the steerage beat in, at which time two balls struck and lodged in the ship's starboard side between the two after guns, and were buried in more than half their diameter; soon afterwards the Persians fled, the dull sailers rowed, being towed by those that sailed best. At six they all got in close to the shore and anchored; we anchored abreast of them as near as our draft of water would permit, when a furious cannonading commenced at a distance of pistol-shot, assisted by our musquetry. This was continued until dark, when we both desisted at the same time,

as if by mutual consent. This second engagement lasted three hours but not a man, either on board the *Eagle* or *Success*, was killed or wounded. Neither the Pasha's ketches or galliotes came near enough to fire a single shot the whole time, nor did they anchor until the firing ceased.

At the break of day the Persians were found to be about 30 miles below Basra. The wind was fair for returning to Basra and Parsons was hopeful that the Agent would do so, but 'was soon convinced to the contrary, as the *Eagle* prepared to turn down the river, and, of course, we and the others followed, according to the orders given verbally, previous to our weighing anchor, so on the next flood the Persian fleet will proceed up the river, destroy the bridge of boats, and carry supplies to the Persian army, and will consequently get possession of Bussora, if they persevere, which they never could have done whilst the bridge of boats was protected'.

On 13 April the *Eagle* and her consorts entered the Persian Gulf, having first passed six galliotes running up the river to reinforce the enemy. The Turks and Arabs in the two ketches were put on board the two galliotes, which were then sent to Grane, now called Kuwait. The ketches manned from the *Eagle* and *Success* proceeded with those vessels to Bushire, where they arrived on the 15th, finding the Company's cruiser *Drake*, Captain Robert Gage, and three other vessels at anchor.

On 12 May Parsons states that H.M.S. *Seahorse*, Captain George Farmer, arrived at Bushire from Bombay and Muscat, with the *Betty*, Captain Colin Faulkner, a large ship bound from Bengal to Basra. As the *Success* had been despatched to Bombay on the 1st, their arrival made a total of nine British vessels in the road, which made the Persians apprehensive that an attempt would be made to capture Bushire. On the 24th Parsons 'accompanied Captain Farmer by his desire on board the *Betty*, in which ship were the Agent and Council of Bussora. He told the Agent, that his orders from Commodore Sir Edward Hughes were to assist the East India Company in any place where he should happen to be, where the Company had any settlement or factory, if it was requested by the Company's servants', and 'to offer his service to convoy any ships bound to Bussora. He added, that he had desired me to accompany him on board, in order that, should there be occasion, I might be an attesting witness of his having made the offer. The Agent returned him his thanks.'

On 15 July Parsons embarked on board the *Seahorse*, which weighed and proceeded with the *Eagle*, *Betty*, the two ketches and three other vessels for Bombay, the *Drake* remaining at Bushire. Nelson and Troubridge, both then seventeen years old, were at this time serving in the *Seahorse*. Nelson, in after years, stated that when he was in the *Seahorse*, he 'visited almost every part of the East Indies from Bengal to Bussorah'. Apparently Nelson's memory must have been at fault in thinking that he had been to

Basra as according to the *Seahorse's* logs and journal the ship did not go there but arrived at Bushire on 25 May,¹ and this is confirmed by Parsons who mentions the *Seahorse's* arrival at Bushire though he gives a different date. Our author says that the

little fleet had fine weather down the gulf of Persia, with pleasant light gales of wind, although contrary; so that our passage down was a kind of traverse sailing, which, though it lengthened our voyage, offered the greater variety, as at different periods we were near both the Arabian and the Persian coasts. We saw Ormuz, Kishm and Gombroon at the same time on the 29th, and on the 31st his majesty's ship *Seahorse* anchored at Muscat in the inner road, together with the ships under her convoy. By the thermometer, which I hung up in the captain's state room, removed quite from the rays of the sun, I found the heat to exceed that of Bushire and was 112 degrees, which arises from our situation being surrounded, except at the entrance of the port, by exceeding high hills, so very near us as to reflect the sun's rays on the ships in the harbour from every side.

Every ship is busy in getting water on board, which at this place is exceeding good; what we took in at Bushire was brackish, and produced fluxes among our crews, and, in conjunction with the excessive heat in coming down the gulf, so debilitated our men, that it was common to have eight, ten, and some days twelve men, fall down on the decks through excessive weakness. At length, the number on the sick list increased to upwards of fifty on board the *Seahorse*, and the remainder were so very weak, that if any hard duty had been required, they would not have been able to have performed it. Few escaped the disorder, either officer or private man; happily it did not last long, as each individual, by rest recovered in three or four days, whilst others, in their turn, felt the same effects of the excessive heat, which was greatly increased by the continuance of a south wind during the greatest part of the time. Captain Farmer and myself had recourse to sleeping on the bare deck in the great cabin near the windows, which were always open, it being impossible to suffer a sheet to be suspended between. The captain and nineteen men, out of near 170, escaped it. Not a man died of those which were attacked.

On 3 August, in accordance with a request received from the governor of Basra, the two ketches were handed over to the Imaun of Muscat, who was fitting out a fleet of thirty-four ships of war for the relief of the city. He was too late, however, to effect this as Basra fell to the Persians in April 1776, but was afterwards taken by the Imaun and re-occupied by the Turks in 1779. On 8 August the *Seahorse* set sail with her convoy for Bombay, where she arrived in company with the *Eagle* and *Betty*, on the 17th.

Parsons remained at Bombay until 7 December, when, 'having a desire to visit the different ports on the coast', he embarked in the *Louise*, Captain Tasker, for Honavar. At this port, on the 15th, he transferred to the *Bombay*, and in company with the *Revenge*, Commodore John Moore, of the Bombay Marine, convoyed a large fleet of coasting vessels to several ports on the coast as far south as Cochin, anchoring again at Bombay on 17 February 1776.

Here Parsons remained until 28 November 1777, when he sailed in the *Prudent*, Captain John Shaw, for Surat. On his return to Bombay at the

¹ 'Nelson in the *Seahorse*', note by Commander Geoffrey Rawson, *Mariner's Mirror*, Vol. xxxiv, p. 121. Nelson joined the *Seahorse* as midshipman and was rated able seaman, 5 April 1774.

end of the year he again sailed in the same ship on 8 January 1778 for Mocha, where he arrived after a passage of fifteen days. Parsons remained at Mocha until 2 April, when he embarked in the *Alexander*, Captain David Anderson, for Suez, and on 10 May, in the Gulf of Suez, received news from the *Expedition*, Captain Pruen, that war had broken out between Great Britain and France in the previous March. On 1 June the *Alexander* arrived at Suez after a passage of forty days, where 'we found riding the *Cormorant*, sloop of war, the *Caranjah*, Company's cruiser, the *Prudent* from Surat and Bombay, the *True Briton* and *Alfred* from Bengal, and four large Turkish ships which trade between this place and Jedda'. Parsons left for Cairo on 29 June and remained at that city until 7 December, when he departed for Rosetta. His book ends there two days later and we do not know any more of his career except that he died at Leghorn in 1785.¹ Parsons bequeathed the manuscript to his brother-in-law, the Rev. John Berjew, vicar of All Saints Church, Bristol, who, in turn, left it to his son, John Paine Berjew, who, 'from a desire to comply with the wish of a much respected father, and the suggestions of several literary and scientific friends', edited it for publication in 1808. The widow of Abraham Parsons died at Bristol on 18 May 1789.

1 No monument exists to him in the English Cemetery.

SMALL CRAFT IN THE RIJKSMUSEUM VOOR VOLKENKUNDE, LEIDEN

By H. H. Frese

THOSE who love the sea and know how to enjoy the beauty of a ship usually show a keen appreciation for ship models. A good model has the quality of opening perspectives in time and space as it leads our imagination into the past or to other parts of the world.

The Rijksmuseum voor Volkenkunde (National Museum of Ethnology), Leiden, Netherlands, provides such food for thought and imagination, for this museum contains—though known to only a few people—a large fleet of model craft from Indonesia, India, the Pacific Isles, China, Japan, Korea, Siberia, the Arctic regions, America and Africa. The visitor will find that only a few of the models are on show. If he asks the attendant, however, he will be taken to the study collection in the basement where, as a result of permanent shortage of space, most of the models are packed on shelves.

The main part of the collection, representing the shipping of the Malay Peninsula and the many islands of Indonesia and the Philippines, includes some 300 models.¹ Many of these are fairly old, one series having been made in 1827 or before. Because of their age and the unfavourable storage conditions, several of the models are damaged or have parts missing. Nevertheless, the collection is of the greatest importance.

It is a spectacular armada. The swift traders and pirate-boats of Malaya and the Rhiow-Lingga Archipelago, with their dipped square sails of matting and their high cabins on the poop; the huge dugouts of Palembang river; the fishing-boats and traders of Java, sturdy craft with oblong sails; the river-boats of Borneo; two- and three-masters of Celebes, the carriers of the Archipelago, trading as far as Siam and Australia; and the many types of dugouts of the Moluccas and the Lesser Sunda Islands, whose hulls, often sharp as a knife, are provided with stabilizing outriggers like the wings of a bird. Altogether they are proof of the regional specialization which the shipping of Indonesia and the adjacent areas presents, offering a diversity so rich as to make even a typological description of this collection impossible in the limited space available here. The models selected for further comment

¹ From Malaya and the Rhiow-Lingga Arch., 53 models; Sumatra and surrounding islands, 31 models; Java and Madura, 75 models; Borneo (except British Borneo), 71 models; Celebes, 39 models; Moluccas, 43 models; Philippines, 8 models.

have been chosen mainly for their fine quality and general interest. The model of one of the personal ships of the Sultan of Rhiow (Plate 1, fig. 1), presented by him to the museum in 1883 (RvV 403/2), is a beautiful craft made with great accuracy and fine craftsmanship.¹ The long black hull reveals in its lines the slender form of the smaller dugout canoes of this area. The bulwarks, painted green with golden edges, are from stem to stern almost parallel with each other, thus making an oblong-shaped deck. This means that the poopdeck, as well as the foredeck, protrude well beyond the bows and quarters. These galleries, or *Dandan* as they are called by the Malaysans, are typical features of many boats in the area.

The overhanging poopdeck is covered by a large roofed cabin with a spacious balcony at the end. Everything is painted in the attractive colours of green, gold, blue and red. The rudder, which is fixed to the straight sternpost by means of gudgeons and pintles, has a backward-pointing tiller controlled by two ropes, which are moved by a capstan-like steering gear forward of the cabin. The main deck of bamboo lattice is laid between the beams. The raised foredeck provides ample space for storing anchors and cables. The finely cut clipper stem ends in a kind of figurehead supporting the bowsprit. Figureheads are very common in Malayan ships, and this is one of the most popular types. According to the catalogue of the Skeat collection the name of the ornament is translated as 'hanging bee's-nest' (p. 8, model no. 447, *Penjajap*).

The vessel has two long, thin masts, the foremast with a forward rake, the other raked slightly backward. Both of them are supported by several stays, and they carry the Malay square sail, a dipping lug made of palm-leaf matting with yard and boom controlled by vang and sheets. At the luff the boom is secured near the mast. Going about in these boats is a somewhat laborious affair, both sails having to be lowered, rolled up on the boom, and carried to the other side. Meanwhile, the vessel is rowed or paddled about, and once it is on its new course the lugs are set again. The manoeuvre takes such a long time that often the anchor is dropped to prevent drifting. The bowsprit is used for securing a forestay along which a jib can be set.

This fast and impressive ship is heavily armed to fend off pirates, a real danger at that time. Two heavy muzzle-loading brass guns mounted on carriages are placed on the foredeck pointing forward. A heavy shield, or *apilan*, for the protection of the gunners, is constructed of horizontal beams

¹ The models from the Malayan and the Rhiow-Lingga area offer an interesting comparison with the forty-seven Malayan boat-models included in the Skeat collection, which was studied by the author in the Museum of Archaeology and Ethnology, Cambridge, in 1949. This collection was presented to the University of Cambridge in 1898 by its collector, the late Mr W. Skeat. The Leiden models, too, are of the last century. Descriptions of the current types by Mr C. A. Gibson-Hill and Professor R. Firth show, however, that many of the old types are still in use to-day.



Fig. 1. Personal ship of the Sultan of Rhiow, 403/2.

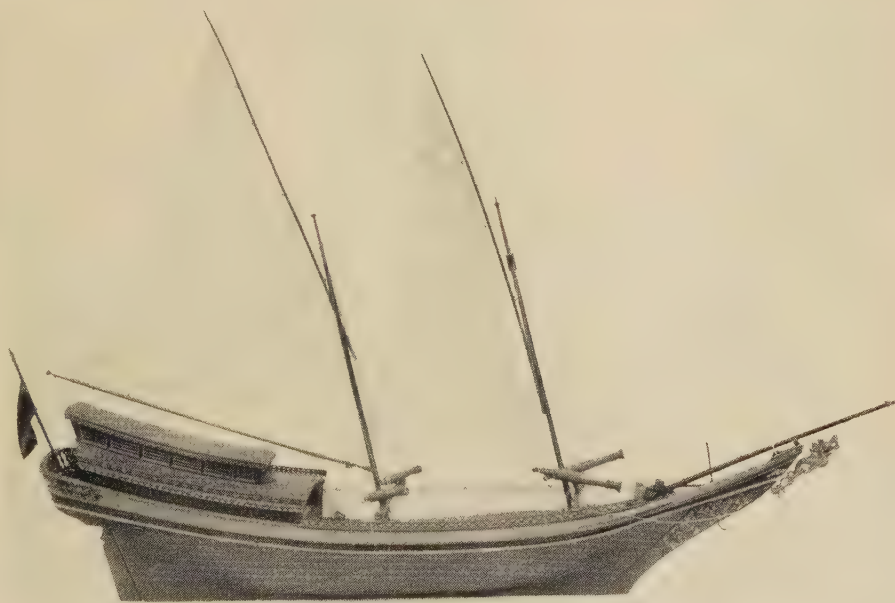


Fig. 2. *Sampan Gebing*, Labuan Ruku, Sumatra, 1008/224.

(Facing p. 102)



for which fresh wood had to be used to prevent dangerous splintering when hit by a ball or bullet.

The next model, a *Sampan Panjang* (RvV 403/3), meaning 'long boat', was presented on the same occasion. Measuring 9 ft. 4 in. long and 10¼ in. wide, it is the largest model in the collection. The hull is extremely slender, with a very long clipper stem ending in a carving of leaf ornament with a bird's head beneath it. Noteworthy is the concave keel-line which gives stem and stern a greater draft than the central section. It is an attractive boat, with the hull painted white and the boards blue with a gold line between them. The single mast carries a trapezium-shaped sail, a variant of the Malay square sail. The crew consisted of six paddlers and a helmsman, for often the craft was paddled instead of sailed. 'In rowing and sailing they are very fast', a comment says.

This and similar boats were used for carrying important persons. According to Mr Gibson-Hill¹ craft also named *Sampan Panjang* were used by the water-dwellers of the Singapore river in the latter half of the nineteenth century. Out of the original houseboats a fast ferry was developed, which was later adapted for racing purposes. They were easy winners when racing against the European yachts of that time. One of the proud possessors of such a boat was the Sultan of Lingga, who had one built in Trengganu. Our model obviously is a replica of such a craft.

In general, accurate data about the real size and age of the craft are seldom available. An exception to this is a collection (series 351) forming originally a part of the showroom of the Dutch Admiralty until it was transferred to the Rijksmuseum voor Volkenkunde in 1883. The models were made in Java under the supervision of Rear-Admiral J. J. Baron Melvill van Carnbee, and sent to Holland in 1827. Considering their age, many of the models are still in surprisingly good condition.

Three craft belonging to this series were used by the Sultan of Johore and his Admiral. The proper name of the first boat is *Bintang Beralle* (RvV 351/56); when spelt correctly it is *Bintang Beralih*, meaning 'Shooting Star' or 'Comet'.² The original ship, which was used exclusively by the Sultan himself, was 72 ft. long, 20 ft. wide and 6 ft. deep. The model is on a scale of 1:30. The craft is typically Malay, with its galleries, its partly roofed cabin, the two thin masts in their heavy tabernacles and square dipping lugs of matting, and the figurehead in the shape of the 'hanging

¹ C. A. Gibson-Hill, 'The Orang Laut of the Singapore River and the Sampan Panjang', *Journal of the Malayan Branch Royal Asiatic Society*, Vol. xxv, pt. 1, 1952.

² Actually for recognition and classification purposes the names of this and other Malay and Indonesian craft are of relative value. Very often the same name may apply to completely different vessels in different localities.

bee's-nest' though fuller in the bows and quarters and more beamy than the above-mentioned boats. Besides the mainsails and jib, the *Bintang Beralih* was fitted with thirty-six oars secured to the heavy bulwarks.

The fighting power was made up of two long iron guns (8-pounders) in front, the guns firing through apertures in the shield. The greatest width of the model being 8 in. the shield with its 11 in. makes a solid front. The secondary armament consisted of twelve bronze swivel guns on the sides, together with muskets, sabres, pikes, klewangs and creeses. On the model the iron guns as well as the swivel guns, of which only two are present, are made of wood. An interesting detail of this and other models is the way the guns are secured to their mountings and the recoil overcome: the device consists of two heavy ropes running outboards from one gun carriage to a notch in the stem and then to the other carriage. The black, white and red paint and the natural brown of the bare wood give the model a sober appearance.

The *Penjajap Julong-Julong* (RvV 351/74) was the personal ship of the Panglimans Prang, the Great-Admiral of Johore. Though similar to the *Bintang Beralih*, the craft is smaller: 66 ft. long, 14 ft. wide and 12 ft. deep. It has two masts carrying trapezium-shaped sails and there are 20 oars.

A still smaller boat of the Sultan of Johore was the *Kakap Unduk-Unduk* (RvV 351/50). It is named after the realistic figure-head of a red-coloured sea-horse, the stern carrying a red tail. The original boat had twenty oars and two masts and sails, and it was armed with two swivel guns and two iron blunderbusses on the sides. Its measurements were 24 ft. long, 9 ft. wide and 5 ft. deep. The scale of the model is 1:20.

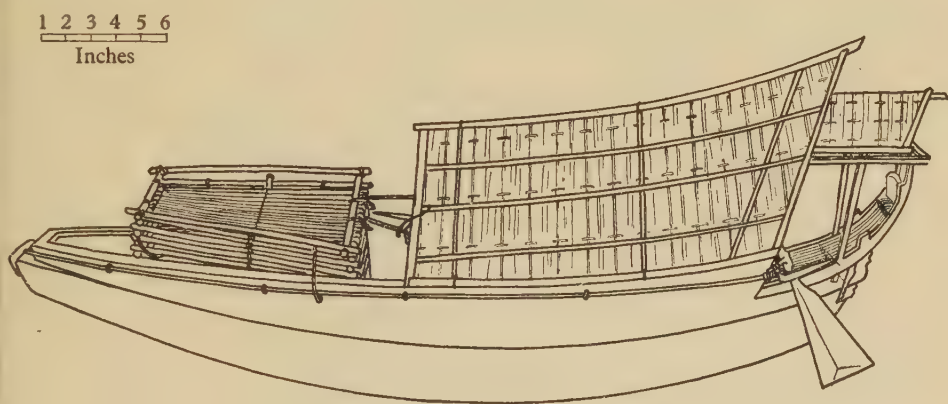
From Sumatra there is, among many others, a wonderfully made model of the *Sampan Gebing* (RvV 1008/224) (Plate 1, fig. 2). Its place of origin is Labuan Ruku, a fishing village on the north-east coast; it is most surprising to find such a fine and highly ornamented craft coming from a simple village. It was used as a man-of-war, for transporting goods, or for carrying official passengers, and it had a crew of fifteen men.

The craft has smoothly curved lines, is sharp fore and aft, and looks very swift and seaworthy. The rudder is secured with gudgeons and pintles to the pointed stern. The long clipper stem has a richly-carved head. Hanging in front of it is a golden figure, probably the *Naga* or holy sea-serpent, the symbol of sea and water. On the poop a cabin with a long skylight covers about one-third of the ship's length.

The craft is rigged with two masts, each carrying a lateen-sail. The nearly vertical yard of each sail has a ring at the lower end and another one a little higher up. By means of these rings the yard is hoisted along the mast. Between the foremast and bowsprit are two stay sails. Before each

mast a curved crossbeam with ornamented ends is laid upon the gunwales, and two swivel guns are mounted on them.

In 1947, on the occasion of an exhibition of these models in the Rijksmuseum voor Volkenkunde, the *Sampan Gebing* was reconditioned and repainted in its original colours. The varnished hull is golden brown, the natural colour of the wood. The boards, however, are green, yellow, red, and dark and light blue. The cabin, painted a reddish brown, has several ridges carved with flower ornaments which are alternately yellow and red. The inside of the bulwarks is light blue, the deck is natural wood. The top ends of the masts and boom are yellow with a red and green painted knob. This boat is a feast of colours, full of the splendour so often to be met in that part of the world.



Text-fig. 1. *Perahu Kajangan*, S. Sumatra, 1008/221.

Of the many craft—mostly dugouts—of the rivers of southern Sumatra it is proposed now to describe a *Perahu Kajangan* (RvV 1008/221) (Text-fig. 1). This craft, from Kayu Agung, is a large dugout with a convex bottom. Stem and stern are blunt, as if part of them had been cut off. The very low freeboard is raised considerably by adding washstrakes which are higher on the quarters than on the bows. They are fixed to the sides of the dugout itself by vertical pegs. The midship and most of the poop are covered by a gabled roof of boards with strips of palm leaf tied upon them. The roof top closely follows the fluent curves of this craft. On the port side a quarter rudder is kept in place by a wooden hook. It can also be worked from the bows by means of a long pole secured to the outward-pointing tiller. Behind the cabin there is another roof supported by two beams, which are very strongly curved and connected with the stern.

This craft is specially made for the transport of pottery. The cage-shaped structure in front is probably used as a container for this type of cargo.¹

A small and simple boat is the *Jalur Maling* (RvV 351/70), also a dugout. It is 16–18 ft. long and 2–3 ft. wide and is made of Meranti wood.² These boats serve as water-taxis, each with a crew of five paddlers, though their name, meaning literally 'thieves-boats', indicates another use for them.



Text-fig. 2. *Perahu Mayang*, W. Java, 360/10050.

This little model illustrates the technique of securing an even thickness of the hull's sides when making a dugout. The exterior is fashioned into shape first. Then at regular intervals holes are drilled as deep as the sides are to be thick. The holes are filled by pegs made of the same wood, which are levelled with the outside of the canoe. The hollowing-out process is then started and continues until the inside faces of the pegs are reached.

One of the best known craft of Java is the *Perahu Mayang* (Text-fig. 2), the fishing-boat of the north coast, from the Sunda Strait as far east as

¹ C. Nooteboom, *De boomstamkano in Indonesië*, p. 25 (Leiden, 1932). This is the authoritative work on Indonesian dugouts.

² *Ibid.* p. 19.

Cheribon. It is a broadly beamed craft 10 ft. wide with a length of 40 ft. Several fine examples of this seaworthy boat are in the collection.

A very handsome one is RvV 360/10050. It is a carvel-built craft on a straight keel, with convex stem and sternposts, both sharply bent inward at the top. The model is made of a varnished yellow wood. The long, narrow quarter-rudder is more like a steering paddle. It is fastened at its top to a vertical post on the stern by means of a grommet, and as the rudder is always on the lee side it has to be shifted from one side to the other when going about.

This open boat has eleven thwarts, one of them being the main-thwart. The short pole-mast is supported only by a rattan backstay running from the top of the mast to the sternpost. The oblong sail, consisting of several widths of matting sewn together, has a yard made up of four spars, tied one upon the other. The result is an elastic yard to which the required bend can be given by means of vang. It reminds one of modern ideas about elastic booms.

As a fishing-boat the *Perahu Mayang* is well adapted to the special requirements of operating the 'payang'-purse seine. The lures are anchored at regular places on the fishing grounds, and at dawn, with its sail lowered, the boat is carefully rowed in a circle round the lure, the starboard oars only being used. Meanwhile, the seine net is shot on the port side, which is free of oars, and the lure is removed. Only then, the boat having completed its course, are the nets gradually hauled in, a task which is facilitated by the low freeboard. As the circle narrows, the fish, encouraged by the frightening yells of the crew and the splashing sounds made by them beating the sea and the boat with their paddles, are driven into the bag in the centre of the net.

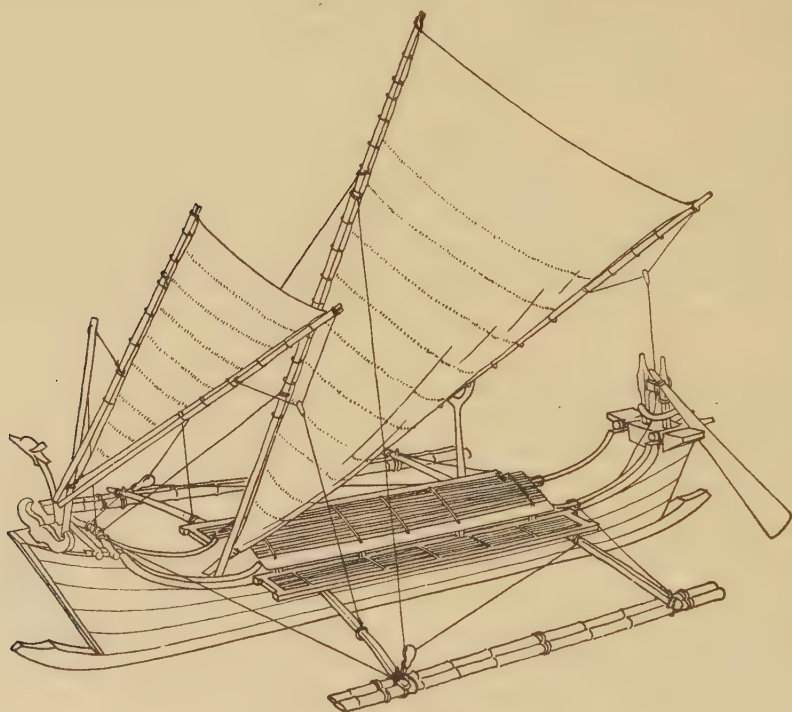
A grave disadvantage of these craft is their dependency on the wind. Often they are too long in reaching the market, with the result that the fish are spoiled on arrival. Attempts have been made, however, to motorize them.

Closely related to the *Mayang* are the Javanese traders or *Pentjalang*. A fine and probably accurate model is RvV 37/595. It has already been described in 1854,¹ and it became part of the museum's collection in 1864.

The *Pentjalangs* were—and still are—used in the Sunda Strait, in west Java, and in the Lampong districts of southern Sumatra. A. C. Gibson-Hill, describing one of these craft which he saw in 1940, estimated its length as

¹ G. F. de Bruyn Kops, 'Iets over de zeevaart in den Indischen Archipel', *Tijdschrift voor Nijverheid in Ned. Indië*, deel 1, p. 47, 1854.

35 ft.¹ In many features it is exactly like the *Mayang*. The freeboard is increased, however, by an extra strake which is particularly high amidships. The craft is partly decked, partly roofed. The mast is equipped with shrouds, and a long bowsprit serves the large matting-made jib.



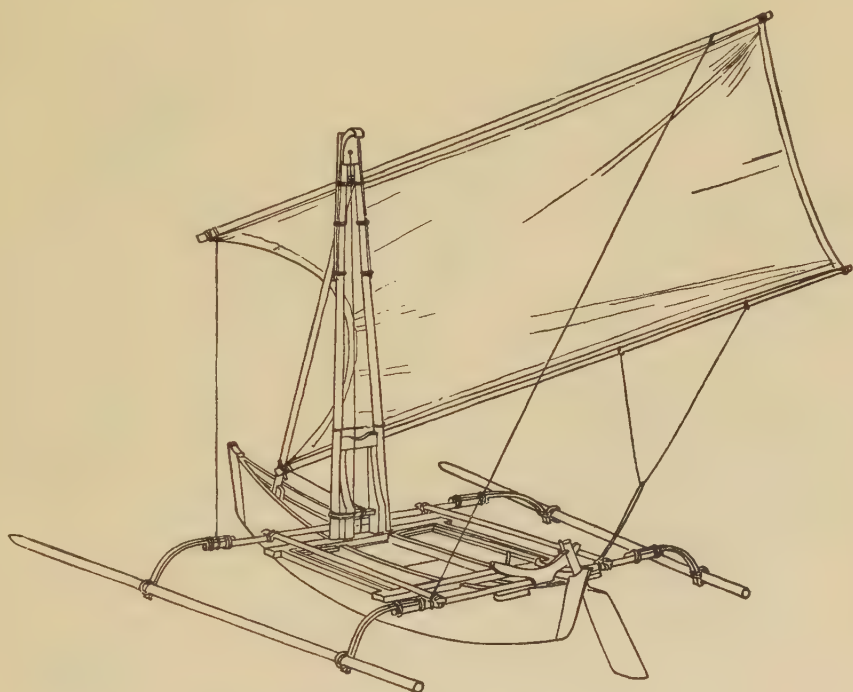
Text-fig. 3. *Paduwang*, Madura 351/4.

A craft characteristic of Madura is the *Paduwang* (RvV 351/4) (Text-fig. 3). The narrow hull is built on a dugout. In the absence of stem and sternposts, both ends of the boat are closed by simple vertical boards. As the dugout keelson is longer than the hull itself, a bifid stem and stern result. Two outriggers, one on each side, consisting of outrigger-booms with double bamboo floats attached to them, provide for a better lateral equipoise. Both sails are fairly large lateens, the foresail on a short mast, the mainsail without any mast at all. The latter is kept in position by vangs and other ropes attached to its yard. If the scale of the model is 1/16, as we are told, the craft itself had a length of 34 ft.

¹ C. A. Gibson-Hill, 'The Indonesian Trading Boats reaching Singapore', *Journal of the Malayan Branch Royal Asiatic Society*, Vol. xxiii, pt. 1, pp. 108-38, February, 1950.

The double outrigger is not limited to Madura; it occurs in the whole of the eastern Indonesian Archipelago.¹ In Celebes and the Moluccas, particularly, most of the smaller craft make use of these stabilizing devices.

Among the many models demonstrating the different forms of outrigger construction,² there is a small though exquisitely made craft, a *Birowang* (RvV 37/294) of South Celebes (Text-fig. 4).



Text-fig. 4. *Birowang*, S. Celebes 37/294.

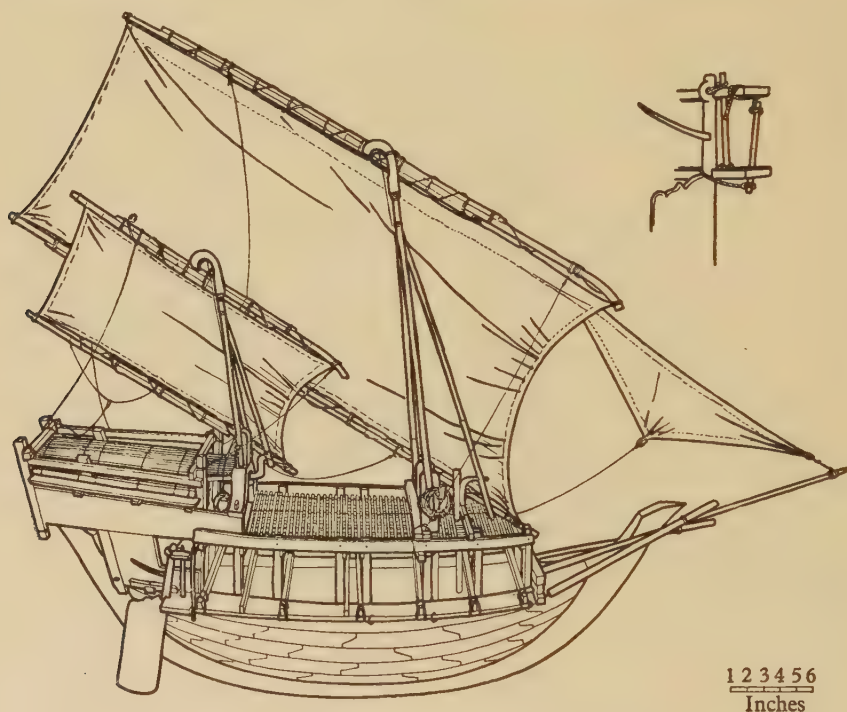
The model is only 10 in. long, but despite this it clearly shows all the important details of its construction. The tripod mast with the rectangular sail and the structure of two crossbeams on the stern carrying—in this case—one long quarter rudder are features typical of both the outrigger canoes and the beamy carvel-built traders.

An example of the latter craft is the *Banawa* (RvV 1009/108) (Text-fig. 5) of Gowa, an old principality in the south-west corner of Celebes. The vessel was specially made for the transport of horses and buffaloes. The

¹ For concise information on single and double outriggers see J. Hornell, *Water Transport, Origins and Early Evolution*, pp. 253–60 (Cambridge, 1946).

² C. Nooteboom, *De boomstamkano in Indonesië*, p. 217, with drawings.

somewhat crudely made model shows a hull broad in the beam and built on a convex keel, with stem and sternposts running high up. On both sides an outboard fore and aft gangway is attached to a number of crossbeams which are secured to the bulwarks; a secondary function of these beams was apparently to divide the deckspace into equal compartments for the cattle. The upper deck covering this 'stable' consists of bamboo lattice.



Text-fig. 5. *Banawa*, Celebes (Gowa), 1009/108.

The two quarter rudders—one at each side—are fixed to a set of heavy crossbeams in such a way as to enable a quick emergency release. The helmsmen have their places on the outboard galleries. Below the poopdeck the captain has his cabin, a cramped space. Main and mizen masts are both tripods with the rear legs fixed to heavy tabernacles by means of a horizontal spar round which they can revolve. If the fore-leg comes adrift from the hook that holds it in place, the mast can be lowered very easily. Both sails, with their composite yards and booms, are made of 'karoro', a kind of matting.

Craft like the *Banawa* are now extinct; *Pelari* and *Paduwakan*, ships with a similar hull, though built much higher and ketch-rigged, have taken

their places. Of these the collection includes only one model, a three-master which, unfortunately is in a very bad state of repair. In other Dutch collections, however, several fine examples are to be found.

Information about these craft in general is given in the fascinating books by G. E. P. Collins, who had one built personally.¹ Even to-day the traders of Makassar and neighbouring places make their trips through the Archipelago, visiting New Guinea as well as Singapore, where they are a common sight.²

Until the latter half of the nineteenth century, however, these long voyages were somewhat risky, for at several places pirates were known to lie in wait for Indonesian traders, and sometimes even European craft were in danger. With their swift and heavily armed vessels, independent of the wind as they could be rowed, they made many a victim among the helpless sailing craft. The Rhiow Archipelago was particularly favoured by them because of the heavy shipping around its islands and the many hide-outs the latter provided. The pirates operating there were often Buginese or people from Makassar, living in villages of their own. One of their craft was seen in the Persian Gulf by R. T. Pritchett who made a sketch of it.³ Another drawing of a similar pirate is reproduced by H. C. Folkard.⁴ A model closely resembling the drawings is RvV 37/578, which has been described by C. Nooteboom.⁵

The inhabitants of Malaya, too, often indulged in piracy. One of the craft used for this purpose was the *Perahu Penjajap* (RvV 370/3145) of which it is said: 'Originally they were used for the official travelling of the Princes of Rhiow-Lingga. Later some of them were used for piracy, and because of their speed, heavy armament, and their crew, they were feared very much by the peaceful traders and sailors.' The museum has a model of a large and fast direme (RvV 351/43), probably from northern Malaya; this model, too, was described by Dr Nooteboom in the above-mentioned article.

In the eastern part of Indonesia, the Illanos or Lanuns of Mindanao, Philippines, operated with their large ships. Model RvV 351/48 shows what such ships looked like: a long hull, double quarter rudders, and three masts with a wooden parapet before each of them. Its measurements were 70 ft. long, 18 ft. wide and 14 ft. deep. The vessel had a crew of 90-160

¹ G. E. P. Collins, *East Monsoon* (London, 1936); *Makassar Sailing* (London, 1937); 'Seafarers of South Celebes', *The National Geographic Magazine*, Washington, January 1945.

² Cf. n. 1, p. 108.

³ R. T. Pritchett, *Sketches of Shipping and Craft*, p. 134, 1899.

⁴ H. C. Folkard, *The Sailing Boat*, p. 430 (London, 1901).

⁵ C. Nooteboom, 'Eastern Diremes', *The Mariner's Mirror*, Vol. 35, no. 4, October 1949.

men, 50 oars and an armament of two long iron guns (8 pounders) in front and two bronze swivel guns at the sides.

The models in the Leiden museum—and those in Cambridge, Rotterdam, Amsterdam and Delft—offer most convincing evidence of the seamindedness of the Indonesian peoples. Daring sailors they were, using the seas surrounding their islands, the main roads in the Archipelago, for fishing, trading and piracy. Trade was not restricted to inter-island traffic; Indonesia has made use of its favourable crossroad position, and trade relations with China as well as with India and Arabia are reported in history. The early existence of relatively large Indonesian vessels may be concluded from the evidence of the reliefs on the Borobudur—the ninth-century Buddhist monument in central Java—showing ships with characteristics which can still be observed on present-day Indonesian craft.

Though many types seem to be unaltered, some considerable changes have been brought about, in this century in particular. The strong competition with western shipping in general caused a decrease in the number of native traders. The traders remaining often adopted European rigging, or they were replaced by schooner-like craft built on western lines.

It is in particular the smaller craft, and among them the fishing boats, which show the least traces of change in form and function. The models in the museum collection help us to obtain a general idea of the present situation. All the other models have a more specifically historic value as documents of the past. In view of this it is to be regretted that they cannot be shown to a more general public.

CHRISTOPHER GUNMAN AND THE WRECK OF THE *GLOUCESTER*

By P. M. Cowburn

PART I

CAPTAIN CHRISTOPHER GUNMAN boasts no separate entry in the *Dictionary of National Biography*, yet, during the period of time between 19 May 1662 when he obtained his Master's certificate and his death in March 1685, his career as a seaman seems to have been both eventful and honourable. 'He was a sober, frugal, cheerful and temperate man', writes Evelyn on 26 March 1685 after having been invited to Gunman's funeral, presumably at Deptford, and he adds the sombre phrase 'we have few such seamen left'.

Recently, Mr Jervis of Doddington Hall, Lincoln, has lent to the National Maritime Museum the five rather battered books containing Gunman's journals. They are written in the same flourishing, uncertain hand and are almost continuous from 1662 till about a month before his death. It is the object of this and a later article to show what light these journals throw on the wreck of the *Gloucester* frigate in May 1682, an incident which closely concerned several of the best-known personalities of the period and which had strange repercussions on Gunman himself.

* * * * *

The wreck of the *Gloucester* on her way to Scotland is well documented. There is, indeed, little disagreement about the sequence of events, the casualties and the outcome, but Laird Clowes (who alone seems to have drawn on Gunman's journal) states one of the problems when he writes: 'There is some reason for believing that the ship was deliberately wrecked by Aire [the pilot] acting as agent for a party of conspirators who desired the death of the Duke of York', a view which, he adds, is 'strongly urged' in 'a memo. [probably by Captain Christopher Gunman] preserved among the Gunman papers at Doddington Hall'.¹ This view is echoed by Clarke in his *Life of James II*,² when he says that the wreck was caused 'through the unskilfulness or treachery of Captain Ayres'.³ A second problem is

1 Laird Clowes, *The Royal Navy*, Vol. II, p. 457.

2 *James II*, by J. S. Clarke, from Stuart MSS. (1816), Vol. I, pp. 730-1.

3 There are several variants of this name: Ayres is perhaps the most common.

the extent to which the Duke of York was to blame for the delay in evacuating the frigate once it was realized that she could not be saved. Mr F. C. Turner, in his recent life of James II,¹ quotes a letter written by the Duke of York to his son-in-law and nephew, William of Orange, to show James's fussiness and irresolution, a view which Sarah, Duchess of Marlborough, who heard the story a day or two after the event from her husband who was an eye-witness, undoubtedly held. A third problem is Gunman's responsibility as captain of the *Mary* yacht which accompanied the expedition for giving correct signals when he realized that the course set by Ayres, the pilot on board the *Gloucester*, was ill-advised. These and other points will be discussed in these articles, but as it is some time since the accounts of eye-witnesses and others have been collected together, it seems wise first to reconstruct the whole incident from the evidence available.

* * * * *

James, Duke of York had been in Scotland since October 1680. The adherence to the Roman Catholic faith of the heir apparent had caused embarrassment, especially after the Popish Plot, and Charles II had felt it wise to remove his brother from the centre of the political scene. Though the Duke held no official position in Scotland, he had been asked to hasten the settlement of peace there with special reference to the militia and, when the Scottish parliament had been convened by the King in July 1681, he had been appointed commissioner. During this time several attempts to force legislation through the English parliament excluding the Duke of York from the succession to the throne failed, so it was felt safe to recall him in March 1682. James met his brother the King at Newmarket, where he was received 'with all the expressions of kindness imaginable'.² In May he wished to return to Scotland to wind up his affairs and bring back his wife who was expecting a child, and the Princess Anne. So at 11 o'clock on the morning of 3 May the Duke came on board the *Mary* yacht at Erith. He was accompanied by 'near 500 people', according to Gunman, most of whom, however, had only come to see him off. The *Mary* set sail at noon and at 8.30 in the evening anchored in Margate Roads. On the following day the *Gloucester* frigate with Sir John Berry in command and five more frigates,³ the *Happy Return* (Captain Wyborne), the *Lark* (Captain William Gifford), the *Ruby* (Captain Thomas Allin), the *Dartmouth* (Captain George Aylmore) and the *Pearl* (Captain William Botham), joined the *Mary* off

¹ F. C. Turner, *James II* (1948), pp. 213-15.

² Luttrell, *Brief Relation of State Affairs*, Vol. 1, p. 171.

³ It will be recalled that the term 'frigate', usually 'frigott' in Gunman's journals, was then and for a long time afterwards used to describe any vessel larger than a yacht.

the North Foreland.¹ Sir John Berry was appointed commodore of the squadron. 'The Duke and all the gentry went on board of Sir John', writes Gunman, 'and in two hours' time all the baggage was out of the yacht on board the frigates.' Later in the day the flotilla, which included several yachts, the *Charlotte* (Captain Ralph Sanderson), the *Katherine* (Captain William Davis or Davies) and the *Kitchen* yacht (Captain Antony Crowe), set sail in rain and 'dourthy' weather. On 5 May at about 7 o'clock in the evening, when the ships were about two leagues E.S.E. of Lowestoft, the Duke recalled the yachts which had been some distance ahead and to windward of the *Gloucester*, and asked Gunman and Sanderson their opinion about the course, whether without tacking to the southward they would avoid the Newarp sands. According to a document quoted by Charnock² both Gunman and Sanderson said that they could not weather the sands on the present course but must stand off. Indeed, Gunman in his journal says bluntly that he thought the pilot on board the *Gloucester* 'madd if he did not tack off (upon which it seems His Royal Highness commanded the pilot to tack although much against the pilot's mind)'. This agrees with Charnock's source which continues,

the pilot whose name is Captain Ayres, a person esteemed to be one of the best and ablest men to the Northward, said we *could* weather the Newarp and all other sands and was much dissatisfied that anyone should mistrust his judgement. His Royal Highness was pleased to answer 'it would be a secure way to tack and stand off till 12 o'clock', which the pilot very unwillingly agreed to. At half past nine the pilot very urgently desired to tack again and H.R.H. was still of opinion to stand off longer. The pilot answered he would engage his life that if we tacked we should weather all the sands. Notwithstanding His Highness commanded the pilot to stand off a glass longer. At 10 we tacked and stood close hauled N. by E. All night we steered NNE till 2 o'clock next morning; then we steered N. and at 4 NNW, the pilot confidently affirming that this course would carry the ship out of all danger and that we were past the Lemon and Oar.

Sir John Berry's narrative, quoted in the Clarendon Letters,³ corroborates this sequence of events and stresses both the professional ability of Ayres and his resentment at being distrusted. But there is a further account of this stage of the incident in a letter written 'in Leith road' by Gunman⁴ to his wife and dated 9 May 1682:

On Friday night about 7 o'clock [he writes], the wind at E., we were near Lisbon [*sc.* Lemon], the yachts all a good way ahead. I bore up and went back to speak with the Duke before night to know what they intended to do. He asked me if on this tack we could weather the sands, and I told him that we could not without standing off to the southward. But the pilot on board the Duke, by name Captain Eares, affirmed that he could do it very well and that he knew better

¹ For these details see *Catalogue of Pepysian MSS.*, ed. Tanner, Vol. 1 (N.R.S.), and the Sergison MSS., No. 1066, in the National Maritime Museum Library.

² Charnock, *Biographia Navalis*, Vol. 1, p. 228.

³ *Correspondence of Henry Hyde, Earl of Clarendon and his brother Lawrence, Earl of Rochester*, ed. S. W. Singer (1828), Vol. 1, p. 70.

⁴ Quoted in E. Hallam Moorhouse, *Letters of the English Seamen*, pp. 96-8.

than anybody, either Gunman or Sanderson (of whom the Duke also asked the question). But seeing they did not tack by 8 o'clock, I ran up under them the second time and asked what was the matter that they did not tack. I was asked the second time if she could not weather the sand. I replied 'No' and stamped and flung my hat on the ground like a madman, saying I would not adventure the King's yacht to follow them. This positiveness of mine the Duke beheld and upon it commanded the pilot to tack, which through much anger from the pilot was done. At 2 o'clock on Saturday morning they altered their course shoreward, which gave me the more admiration, so that I said to my people that it might hit well, but I should think it a wonder if it did. But the pilot said he thought I might be mad, for he was well assured that he was clear of all the sands, which was not out of his mouth before the ship struck.

This letter shows the personality of Gunman emerging more definitely than in the bald statement of fact in his journal.

* * * * *

At 5.30 on the morning of 6 May the *Gloucester* ran aground on the Lemon and Oar sands 2½ miles E.N.E. of Cromer. The other vessels seem to have been only a quarter or half a mile off, yet so violent was the damage done to the *Gloucester* that she sank within an hour and only about half those on board were rescued. The Duke of York, with Colonel John Churchill and certain noblemen, escaped in the *Gloucester's* boat and were taken on board the *Mary* yacht which set sail at 7 o'clock and reached Leith at 8 o'clock the following morning where, wrote Gunman, 'I safely landed His Royal Highness, God be praised'. The *Katherine* and *Charlotte* yachts arrived at Leith at the same time, the *Happy Return*, the *Lark* and the *Kitchen* yacht on 8 May, and the *Ruby*, *Dartmouth* and *Pearl* on the afternoon of 9 May. On 15 May the Duke came on board the propitiously named *Happy Return* frigate, 'where', wrote Gunman,¹ 'he commanded me to attend on him into England this present voyage for the safe conducting him and the Duchess which accordingly I did. He ordered Captain Lawrence Wright² to take charge of the *Mary* yacht during my absence.' They sailed that evening and were soon passing Berwick 'with all the guns round the town' firing in salutation. At noon on 27 May the Duke and Duchess left the *Mary* yacht to which they had transferred off Tilbury and completed the last stage of their journey from Half Way Tree to Whitehall in their barge.³ And so the journey ended successfully for the Duke who seems in consequence to have regained much of his previous popularity. A medal was struck to commemorate his escape⁴ with a bust of the Duke on the obverse and a representation of a sinking ship, a rock and a distant

1 Journal, 15 May 1682.

2 Captain Lawrence Wright was commissioned by King James II to command the *Mary* yacht on 27 April 1685 after Gunman's death. (*Pepys MSS.*, ed. Tanner, Vol. 1, p. 427.)

3 Journal, 27 May 1682.

4 Lediard, *Life of John, Duke of Marlborough* (1736), where the medal is illustrated.

castle on the reverse, together with the legend '*impavidum ferient*'. Also a number of 'broadsides' were published in England and Scotland¹ commemorating the safe return of the Duke which vied with each other in adulation if not in literary merit. One of the most fulsome, for example, ran thus:

Almost as great as Caesar's self is here,
a no less deity than three kingdoms' heir.

Sir John Berry,² commodore of the squadron, who escaped almost at the last moment 'by a rope over the stern' of his wrecked ship into Captain Wyborne's boat, was completely exonerated from any blame and was given command of the *Henrietta*, a third rate, and of a squadron designed for the coast of Ireland.

Captain Ayres, the villain of the piece, also escaped and was taken on board Captain Sanderson's yacht, the *Charlotte*, and 'secured' till he could be brought to trial. The Duke of York, in the letter to William of Orange mentioned above, regretted the escape of Ayres to whose 'too great presumption' and 'mistaking both his course and distance' he attributed the loss of the ship, though he admitted him to be 'esteemed one of the ablest pilots we had for these Northern seas'. 'Had I then known [*sc.* that Ayres had been rescued]', James grimly added, 'I had caused him to have been hanged up immediately according to the custom of the sea', a view which is echoed by Pepys, himself an eye-witness, in a letter to Hewer³ suggesting that 'could it be regularly done' the pilot should be tried and hanged in Edinburgh 'for the nearer satisfaction of those great families of this kingdom [Scotland] who (it is feared) would be found the greatest sufferers in this calamity'. In this same letter Pepys asks that Lord Brouncker should initiate an enquiry into the whole question of pilots appointed by the Navy Office, and some of Pepys's naval minutes⁴ show that he was far from happy about the whole business. Ayres was in fact condemned to imprisonment for life at a Court Martial held on board the *Charlotte* yacht under the presidency of Sir Richard Haddock on 6 June.⁵ But for Gunman the incident was not closed with his return to London.

* * * * *

¹ See Paper read to Royal Historical Society by Lt.-Col. Alex Fergusson, Summer 1880.

² Charnock, *Biographia Navalis*, Vol. 1, pp. 152-3. Sir John Berry eventually became Rear-Admiral and later Vice-Admiral in the Narrow Seas under Lord Dartmouth in 1688. (Tanner, *Catalogue*, Vol. 1, p. 313.)

³ Letter to Hewer from Edinburgh dated 8 May 1682 printed in *Diary and Correspondence of Samuel Pepys*, ed. Braybrooke (1887), Vol. IV, pp. 225-8.

⁴ *Pepys' Naval Minutes* (N.R.S.), esp. pp. 146, 147, 149-50.

⁵ See the curt reference in Pepys's Register of Sea Officers: 'made incapable to serve the king by a Court Martial upon the loss of the Gloucester'. (Tanner, *Catalogue*, Vol. 1, p. 316.)

To return to the details of the wreck itself, the main eye-witness accounts to have survived are those of Sir John Berry, of Sir James Dick, the Lord Provost of Edinburgh, who was amongst the Duke's guests in the *Gloucester*, of Pepys who had very nearly been persuaded by the Duke to travel in the *Gloucester* all the way to Scotland, but had transferred to the *Katherine* yacht 'for room's sake', possibly in Margate Roads at the beginning of the outward journey, of James Duke of York, and of Christopher Gunman himself.¹ A second group of accounts is of interest, though probably of less value. There is the account given by John Churchill to his wife who was attending the Princess Anne in Edinburgh.² This is probably the source used by Lediard in his *Life of Marlborough*, which seems to have been approved by the Duchess when she read it over fifty years later.³ Secondly, there is the letter⁴ written by William, 2nd Baron and 1st Earl of Dartmouth, to Erasmus Legge,⁵ who was with the Duke in the *Gloucester*, refuting the 'story book' reference in Burnet's History.⁶ Thirdly, Agnes Strickland in her *Life of Mary of Modena* draws on the queen's account presumably written up from her husband's description.⁷ Lastly, there are the biographies of Berry and Gunman in Charnock's *Biographia Navalis*.

Let us now consider these accounts in detail. Sir John Berry states in a letter to Lord Treasurer Hyde, which includes a narrative written aboard the *Mary* yacht in Leith road dated 8 May 1682, that the *Gloucester* ran ashore at 5.30 in the morning on Saturday 6 May and 'beat along the sand, not sitting fast. Whilst our rudder held', he continues, 'we bore away west and upon every list of the sea went off.' Then the rudder was struck off and also a plank so that 8 ft. of water were made 'in a moment'. In spite of pumping the ship 'must be lost', so Berry begged the Duke to have his barge hoisted. The Duke agreed to do this eventually when he saw that the situation was hopeless, and took as many persons of quality with him in the

1 Berry's account is printed in the Clarendon Correspondence quoted above. Dick's account is printed in Fergusson's paper to the Roy. Hist. Soc. 1880. For Pepys's letter to Hewer, see p. 117, footnote 3. James's account is in a letter to William of Orange in Prinsterer, *Archives de la Maison d'Orange-Nassau* and quoted in F. C. Turner, *James II*, p. 213. Gunman's account is in the last volume of his journals and in the letter to his wife printed in Hallam Moorhouse (see p. 117, footnote 4). It is considered in more detail in a later article.

2 Lediard, *Life of John, Duke of Marlborough*.

3 Churchill, *Marlborough, his Life and Times*, Vol. 1, pp. 156 ff.

4 Quoted in Burnet, *History of my Own Times*, ed. Airy, Vol. 11, footnote on pp. 326-8. It is strange that Mr F. C. Turner, quoting this letter in his *James II*, suggests that it was nearly contemporary with the events it describes.

5 Col. George Legge was created 1st Baron Dartmouth on 2 December 1682.

6 Burnet, *loc. cit.* p. 328.

7 Strickland, *Lives of the Queens of England*, Vol. vi, pp. 138 ff.

boat as she could carry. 'The government of the ship being lost and everyone crying for help, yet amidst all this disorder and confusion, I could not but observe', adds Berry, 'the great duty the poor seamen had for the preservation of His Royal Highness' person: when the barge was hoisted out and lowered down into the water, not one man so much as proffered to run into her; but in the midst of all their affliction and dying condition did rejoice and thank God His Royal Highness was preserved.' The Duke ordered all the yachts to anchor and send their boats to the wreck where rescue work continued until the water was 3 ft. above the gun-deck. Many were lost, though Berry does not give exact details (which he would not then know as the various vessels did not all reach Leith¹ at the same time as the *Mary* did), but he adds that all the 'persons of quality' were saved except the Earl of Roxburgh, Lord O'Brian, the Laird of Hopton, Sir Joseph Douglas, Lieutenant Hyde (the Lord Treasurer's brother) and Hollis the Duke's equerry. The narrative closes with the reference to the pilot which has already been quoted, and is accompanied by a covering letter in which Berry regrets especially the loss of 'your Lordship's brother' who was missed in the 'general disorder' so that Berry was obliged to give up the search for him and save himself 'as the rest of the common men did'. When Charnock reaches the incident in his biographical note on Berry he sets out to refute the accounts of Burnet and others who had criticized Berry. Charnock's account of the wreck is expressed in very nearly the same words as Berry's own account.² He does, however, give the casualties as '5 persons of quality' and 'several of the Duke's servants and 130 seamen'.

Sir James Dick was Lord Provost of Edinburgh from 1680 to 1681 and was a guest of the Duke of York on board the *Gloucester*. His account is written at Edinburgh and dated 9 May. He says that the wreck was 'occasioned by the wrong calcul and ignorance of a pilot', and then in graphic terms describes the escapes of the various persons of quality. The Duke went

out of the large window of the cabin where his little boat was ordered quietly to attend him lest the passengers and seamen should have thronged so in upon him as to overset his boat. This was accordingly so conducted as that none but the Earl of Winton and the President of the Session (Sir David Falconer) with two of his bedchamber men (John Churchill afterwards Duke of Marlborough was one of them) went with him. They were forced to draw their swords to hold people off. We, seeing they were gone, did cause tackle out with great difficulty the ship's boat wherein the Earl of Perth got, and then I went, by jumping off the shrouds. The Earl of Middleton immediately after me did jump in upon my shoulders; withall there came the Lord of Touch (Seton of Touch-Seton, Co. Stirling, hereditary armourbearer to the sovereign 'from time immemorial') with several others...

¹ See Gunman's journal, entries for 7, 8, 9 May 1682.

² Charnock, *Biographia Navalis*, Vol. 1, p. 152.

However, before the boat could make off, twenty or thirty seamen leapt from the shrouds, according to Dick, which made the boat so likely to capsize that 100 more preferred not even to make the attempt.

There will be perished in this disaster above 100 persons [he adds], for I reckon there were 250 seamen and I am sure there were 80 noblemen, gentlemen and their servants [*sc.* on board]. . . . Our difficulties and hazards that were in this boat were wonderful. . . . we were so throng we had no room to stand, and when we were forcing ourselves from the ship, she being sinking by degrees all the time, and besides the surfs were so boisterous, we were like to be struck in pieces. . . . It was not but with great difficulty that we forced out the boat from the ship, and when we came to row to the nearest yacht, the waves were such, we being overloaded, that every moment we thought to have been drowned, and being about midway to the yachts, there were a great many swimming for their lives, who caught a dead grip of our boat, holding up their heads above the water, and crying for help, which hindrance was put off and their hands loosed by telling they would both lose themselves and us.

But Dick had to haul in one of these in case he should have been pulled out himself. 'I was in my gown and slippers lying in bed when she first struck', writes Dick, adding a more personal note, 'and did escape in that condition.' When the boat reached Captain Sanderson's yacht (the *Charlotte*) which was about a quarter of a mile off with the three other yachts, according to Dick, there was the added danger of being run down 'by reason of the great sea', but a rope was cast and the boat was brought round to the leeside, 'then every man climbed for his life, and so did I, taking hold of a rope and made shift upon the side till I came within men's reach and was hauled in'. By this time the *Gloucester* had gone down completely. 'I could not see one bit of our great ship above the water but about a Scots ell long of the staff upon which the Royal Standard stood.' Dick ends his vivid account with the statement that 'there would have been relief by boats if she [the *Gloucester*] had stood half an hour longer'. He also confirms the loss of 'Lord Hyde's brother who was Lieutenant [*sic*] of our ship' and records with understandable amazement the fact that 'within 5 or 6 days' the Duke is to take shipping for London with the Duchess and the Lady Anne 'notwithstanding the disaster'.

Pepys's account is of interest because it reveals certain facts not otherwise recorded, is slightly hostile and is engagingly human. The main source is the letter to Hewer from Edinburgh two days after the wreck. At the moment of writing he is still uncertain about the losses as the *Kitchen* yacht which had the best opportunity of saving men 'as lying nearest and longest about the *Gloucester*' had not then arrived, though we know from Gunman's journal that she was to arrive at Leith on 8 May, though presumably after Pepys's letter was written. The *Gloucester*, writes Pepys, 'struck. . . about 5 in the morning on Friday last [6 May] from an obstinate overwinning of the pilot in opposition to all the contrary opinions of Sir

John Berry, his master, mates, Colonel Legg, the Duke himself and several others....The pilot is one Ayres, a man that has heretofore served the Duke as pilot in the war...and one greatly valued as such by him.' Pepys, it will be remembered, travelled in the *Katherine* yacht though he had 'abundant invitation to have gone on board the Duke'. He preferred, though, 'for room's sake and accommodation' to keep his own (Navy Office) yacht where he had only Sir Christopher Musgrave, Lieutenant-General of the Ordnance at the time, and some servants with him on board, and there is no doubt that he was rather pleased with himself at having avoided the danger and discomfort of the wreck. Between the time when the *Gloucester* struck and 'her final sinking there passed not (I believe) a full hour', he writes, 'the Duke and all about him lying in bed, and (to show his security) the pilot himself'. The Duke 'by the single care of Colonel Legg was first sent off in a boat with none but Mr Churchill in her to prevent his being oppressed with men labouring their escapes: some two or three however did fling themselves after him into her and my Lord President of Scotland (James, Marquis of Montrose), by the Duke's advice endeavoured it, but, falling short, was taken up out of the water by him. Mr Legg...got into a boat and was received on board us' with several others. Pepys then says how lucky it was that it had not happened sooner, i.e. in the dark, 'nor ought I to be less sensible of God's immediate mercy to myself in directing me (contrary to my purpose at my first coming out, and the Duke's kind welcome to me when on board him in the river) to keep to the yacht; for many will (I doubt) be found lost as well or better qualified for saving themselves by swimming and otherwise than I might have been'. Pepys ends his letter by telling Hewer to inform Lord Brouncker, with the hint that 'some early enquiry be made into the care the Navy Office will be found to have used in providing for his [*sc.* the Duke's] safety and ship with respect to the appointment of a good and sufficient number of pilots on this occasion; for I hear something muttered here about it, and it will not, (I doubt) be judged enough for them to leave it to the Duke to take whom he pleased'. Hewer wrote back on 13 May¹ expressing relief that Pepys was safe and saying that a commission for holding a Court Martial had been sent to Berry the previous day. In an undated minute,² presumably written later, Pepys throws further light when he writes that there was

little sign of our commander thinking the *Gloucester* in any great danger, when not only the Duke and Col. Legg but Sir J. Berry himself were gone to bed when she struck, and the pilot gone into

¹ *Diaries and Correspondence of Samuel Pepys*, ed. Braybrooke, Vol. iv, p. 228.

² *Pepys' Naval Minutes* (N.R.S.), pp. 149-50.

his cabin, if not in bed; which could not be from overwatching, the ship having laid at anchor from 8 at night to 8 in the morning the day before. Captain Gunman also and Captain Sanderson who were in the yachts that sounded before the *Gloucester* were both in bed. Whether Captain Birch and Captain Leak(e)¹ were up or not I know not. But myself was abed and was wakened by Capt L's crying out upon the deck that the Duke was on ground. So that Captain Wyborne in the *Happy Return* who was about a mile astern of us was the only commander of the whole fleet that was out of his bed at that time.

The last eye-witness account to be considered here is that of the Duke of York in a letter to William of Orange written from Edinburgh.

Before this gets to you [the Duke writes], you will go near to have heard of my being safely arrived here, though the frigate in which I was in [*sic*], was cast away upon a sand called the Lemon, which lies some eight leagues from the coast of Norfolk. It was on Saturday morning the ship was lost, and by Sunday night I landed at Leith, and so was here by nine o'clock that night. We lost a great many men, and considering the little time the ship was above water after she struck first, 'twas well so many were saved; of lords there were drowned Lord Roxborough and Lord O'Brien; of gentlemen, Lieutenant Hyde, who was lieutenant of the ship, and Captain Stuart, a reformed, both English; of Scots, Hopton, Sir Joseph Douglas and one Levington a physician; several of my underservants were drowned, and of 250 seamen, which was the ship's complement, 110 were lost. . . .

Then follows the observation about the pilot already quoted, 'who must receive his doom', continues the Duke, 'by a Court Martial so soon as I shall arrive in England which I hope will be some time the next week, for I intend to embark with the Duchess and my daughter about Monday next on board the *Happy Return*, a fourth-rate frigate; 'twas the *Gloucester*, a third-rate, was lost.'

The next accounts are at best second-hand, but at worst based on partisan gossip and wishful thinking, and nearly all revolve round the behaviour of the Duke of York.

Burnet's account contains perhaps the most famous story. It runs as follows: 'The Duke got into a boat: and took care of his dogs, and of some unknown persons who were taken from that earnest care of his to be his priests. The long boat went off with very few in her, though she might have carried off[f] above 80 more than she did; 150 perished, some were men of great quality. But the Duke took no notice of this cruel neglect, which was laid chiefly to Legge's charge.' Airy, in his notes on Burnet's History, rightly queries the possibility of a long boat being able to carry '80 more than she did', and indeed Agnes Strickland, drawing on the Duchess of York's account then preserved in the Chaillot collection, states that the Duke's boat held only six persons besides the rowers. From the same

¹ Leake, later Admiral of the Fleet, was son of Richard Leake, Master Gunner of England.

source she says that the only priest to escape was Père Ronché, the Duchess's almoner, who saved himself by seizing a piece of driftwood. A letter written by the Earl of Dartmouth to Erasmus Lewis dated 25 January 1723/4 disposes of two further points, the Duke's concern for his dogs and Legge's share of the responsibility in the ineffective rescue work. The writer of this letter was Legge's son who presumably heard about the whole incident direct from his father, but the letter is of such interest that the relevant part deserves to be quoted:

...my father was on board the *Gloucester*, but so little deserved to have the drowning 150 men (which the bishop has so liberally bestowed upon him) laid chiefly to his charge, that it was in great measure owing to him that any escaped. After the ship had struck, he several times pressed the Duke to get into the boat, who refused to do it, telling him, that if he were gone, nobody would take care of the ship, which he had hopes might be saved, if she were not abandoned. But my father finding she was ready to sink, told him if he staid any longer they should be obliged to force him out; upon which the Duke ordered a strong box to be lifted into the boat, which, besides being extremely weighty, took up a good deal of time, as well as room. My father asked him with some warmth if there was any thing in it worth a man's life. The Duke answered, that there were things of so great consequence, both to the king and himself, that he would hazard his own, rather than it should be lost. Before he went off, he enquired for Lord Roxburgh, and Lord Obrian, but the confusion and hurry was so great, that they could not be found. When the Duke and as many as she would hold with safety were in the boat, my father stood with his sword drawn, to hinder the crowd from oversetting of her, which I suppose, was what the bishop esteemed a fault: but the king thanked him publicly for the care he had taken of the Duke; and the duchess, who was not apt to favour him much upon other occasions, said upon this, that she thought herself more obliged to him, than to any man in the world, and should do so as long as she lived. I cannot guess what induced the bishop to charge my father with the long boat's not being sufficiently manned; for if that were true (which I much doubt), it was not under his direction, he being on board in no other capacity but as a passenger, and the duke's servant. And I believe his reflection upon the duke for his care of the dogs to be as ill-grounded, for I remember a story (that was in everybody's mouth at that time) of a struggle that happened for a plank between Sir Charles Scarborough,¹ and the duke's dog Mumper, which convinces me that the dogs were left to take care of themselves (as he did), if there were any more on board; which I never heard until the bishop's story book was published. This is all in relation to that affair that ever came to the knowledge of

Sir,
Your most faithful,
humble servant,
Dartmouth.

It will be recalled from Pepys's account, already quoted, that Legge did not escape in the Duke's barge himself but in another boat later, a point about which Pepys is not likely to have made a mistake, for Legge was taken up on board the *Katherine*, Pepys's Navy Office yacht. So at any rate Legge cannot be accused of rescuing himself at the expense of others

¹ Usually 'Scarburgh'. He was physician to James and other members of the royal family later. He was a personal friend of the famous William Harvey who discovered the circulation of the blood.

in the first available boat, and anyway, as his son justly remarks, he was only a passenger and had no special responsibility on board other than towards his royal master.

In his *Life of the Duke of Marlborough*, Lediard recounts the incident fully since Churchill was with the Duke, and comments on a number of variant stories including Burnet's. Lediard seemed to believe that Churchill himself was 'instrumental in saving his master's life by hindering many from entering the boat, who were pressing into it and would infallibly have sunk it', rather than that the Duke delayed 'at the hazard of his own life' before ordering the pinnacle to put off to ensure the safety of Churchill. Lediard's account at all events confirms the fact that James stayed on board the *Gloucester* some time after she struck, thereby no doubt preventing rescue work from proceeding, and probably forgetting that he was the most important person on board and so should be rescued first. James also showed concern for his staff and guests and indeed for his personal property, or at any rate the strong box which may have contained his memoirs. There is evidence too that his obstinacy and lack of decision revealed themselves so that even Churchill could tell Sarah confidentially about it. Her comments on reading Lediard many years later are interesting: 'I have read the account of the shipwreck of the *Gloucester*, the truth of which I had as soon as the Duke [*sc.* of Marlborough] came to Scotland from his own mouth; (for I was there) who blamed the Duke [*sc.* of York] to me excessively for his obstinacy and cruelty.' She adds that there would have been no casualties if the Duke had not been so obstinate, referring to his 'false courage'. Then after mentioning Lord Griffin's escape 'at the last moment by catching hold of a hen coop', she says 'all that Lediard relates to filling the boat with the priests and the dogs is true. But I don't know who else went in the boat or whether they were of the same religion.' Sarah's memory can hardly be relied on after an interval of over fifty years, especially in view of the relations between the Churchills and the Duke of York in the late 1680's, but it must be remembered that in 1682 John Churchill was at the height of his popularity with the Duke, and the ill-starred reign of James II had not yet raised the later conflicts in loyalty. In fairness to James, Duke of York, it seems that there are mitigating circumstances. His 'callousness' is surely disproved by his impulsive action in personally pulling into the shallop the Marquis of Montrose, by no means a friend of his, even though Churchill was deputed to prevent overloading, and again the rescue of the poor fiddler who, however, lived to go over to William of Orange.¹ Again James seems to have given

¹ Strickland, *Lives of the Queens of England*, Vol. vi, p. 141.

11 months' pay to the widow and a sum of money to each child of every seaman who perished.¹ Nor must we forget the 'great huzza' which went up when James was seen to be safely installed in the boat, a point mentioned by Berry and stressed in Clarke's Life.

James's fussiness and irresolution are almost certainly facts both on this occasion and at other times in his life, but Mr F. C. Turner seems wide of the mark when he uses the letter to William as evidence of callousness,¹ for this letter stresses the number of casualties and the relief felt by the Duke that so many were saved 'considering the little time the ship was above water after she struck first', and there is the very strong language about the pilot already quoted. Another factor which Mr Turner ignores is the weather;² indeed, he goes so far as to say that the 'picture which we form in our mind's eye is that of a calm sea with a couple of yachts standing by and several boats not daring to approach the *Gloucester* for fear of being swamped when she goes down'. This does not agree with Dick's 'boisterous surfs' and 'great sea', nor with Gunman's phrase, 'it blew hard and a great sea', in the letter to his wife. James was a good enough naval officer to realize that the dangers of embarking in small boats in such weather conditions were considerable, and there is always the likelihood that he was not told how serious the damage to the *Gloucester* was. Nevertheless, the concern for his box in such a moment of crisis, if Colonel Legge's account to his son can be trusted, must have exasperated his more impatient and less nautically minded comrades in distress.

* * * * *

From these accounts we are able to draw certain conclusions about the wreck. First there is no definite evidence from any of the contemporary records that it was planned. This does not disprove the theory that there may have been a plot against the Duke of York, and the shadowy figure of Captain James Ayres may well have been more sinister than we think, but there is no direct proof, and Gunman's journals throw no further light on this point. Secondly, it would seem that Gunman could hardly have been involved in any such plot because he does seem to have enjoyed the complete confidence of the Duke who would hardly have entrusted himself and his family to Gunman's care for the return journey to England if he had suspected him of conspiring with Ayres or with anyone else. It will be seen in the next article that Gunman was found guilty of neglect of duty at a Court Martial soon after his return to London, but even then, as we

¹ Burnet, *History* . . . , ed. Airy, footnote on p. 327 in Vol. II.

² F. C. Turner, *James II*, pp. 213-15.

shall see, the existence of a plot against the Duke is never suggested. Thirdly, the behaviour of the Duke himself during the wreck does not seem to have been dishonourable. His main critics are not eye-witnesses and they are known to have been biased against him. James's later career as king tends to overshadow his earlier reputation as a naval officer of more than ordinary ability; indeed, he seems to have suffered more than most the fate of the dog with a bad name.

(To be continued)

THE ORIGIN AND OBSERVANCE OF THE DRAGON BOAT FESTIVAL IN CHINA

By G. R. G. Worcester

THIS year (1955), the Year of the Rat, the Dragon Boat Festival falls about the middle of June, and, doubtless it will be celebrated in many places in China and in other countries where there are large colonies of Chinese, in the time-honoured way, with Dragon Boat races on canals, rivers and lakes, the scattering of rice upon the waters, the eating of three-cornered cakes of glutinous rice and the floating of small paper lanterns on the waters after dark.

This festival, the mid-Autumn Festival and the New Year are still considered the red-letter days of the Chinese year, and this, the Dragon Boat Festival, is, probably, the most picturesque of China's many celebrations.

Economically speaking, it is the most important of the three settlement days in the Chinese business world, when accounts are closed and debts collected—if possible. Astronomically, it marks the turning point of the seasons. It is also the day for a spiritual clean-up of the household and for the colourful Dragon Boat Races.

The Chinese call it the Wu Yüeh Chieh, which means the Fifth Moon Festival. The name Dragon Boat Festival was given to it by the British when they first came to China because of the Dragon Boat Races to be described later.

The festival is said to have been first observed some time in the 3rd century B.C. in commemoration of Ch'ü Yüan. This great statesman, the legend runs, found himself powerless to check the abuses of his age. In desperation he sat down and calmly composed the famous poem *Li Sao*, or *Song of Sorrow*, detailing his anxieties; and then, clasping a huge stone in his arms, he jumped into the water and added one more to the long list of romantic suicides in the Tung T'ing Lake.

His *Song of Sorrow* had brought many sympathizers to seek him, and rescue parties were rushed to the spot. Boats were rowed up and down searching for him, but all in vain.

Mourning his death, the people prayed that his body would be unharmed in its watery grave, and, to prevent the fish from injuring his body, food was thrown into the lake to distract them.

The tragedy took place on the 5th day of the 5th moon, and ever after

this dramatic episode the people of the District of Ching Ch'u have held an annual festival on this date and thrown offerings of boiled rice into the lake to appease his spirit.

Soon after his disappearance his apparition appeared to some devotees and claimed that he had been unable to partake of these sacrifices, as they had all been devoured by an ill-natured dragon. He suggested that the rice should, in future, be wrapped in silk and tied with coloured threads. After this plan had been adopted, the spirit appeared once more to praise its success.

It may, at first sight, seem strange that a spirit should take the trouble to return and make practical suggestions about food; but it is, of course, well known that spirits in China, particularly virtuous ones, do pay great attention to food of all kinds.¹

Be that as it may, this particular request is considered by the Chinese to be the origin of the triangular rice cakes that, even to this day, are still offered to Ch'ü Yüan.

In course of time these offerings to the spirit of Ch'ü Yüan came to include the appeasing of the spirits of all those who had suffered drowning, who were thus not properly buried in their ancestral graves and so had been forced into the category of wandering and, therefore, mischief-making ghosts.

The Chinese are a very practical people, and so gradually the custom grew into the launching of small lanterns made of oiled paper, which travel down river with the current, so that these homeless spirits of the drowned may see their way to finding the dole cast for them on the waters.

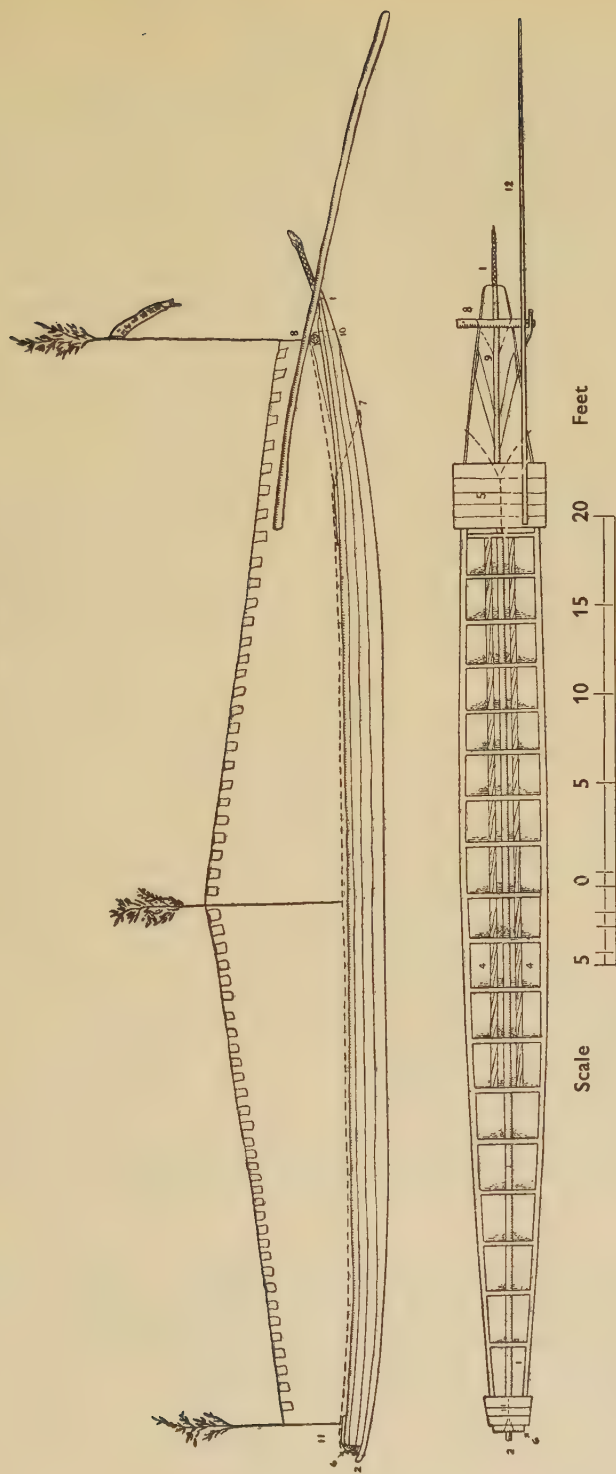
Like the other two festivals of the lunar year, the Dragon Boat Festival is also a day on which friends and relatives exchange presents, and on which Chinese homes offer plenty of specialities to eat. The Chinese are the greatest epicures in the world, and every major festival is marked with eatables of special interest.

For this festival the most important dish is 'rice feet', so called because this great delicacy, folded in leaves, resembles the bound feet of the Chinese women of the last generation. It is made in the form of a conical package of boiled rice mixed with sugar and pork or ham.

Although the festival is a national holiday, it is considered as being the worst day of the year. Evil spirits lurk everywhere, and poisonous insects and reptiles seek to establish their spheres of influence. Noon is the zero hour of the campaign; and, in order to repel the noxious influences rampant

¹ The sceptical should consult J. J. M. de Groot, *The Religious System of China*, Vols. I-VI, Leyden, 1892-1910.

TYPICAL YANGTZE DRAGON BOAT



1, The Dragon's tail; 2, low stump to carry Dragon's head; 4, 6 in. planks over bulkheads; 5, Laodah's platform; 6, wooden chock; 7, chock to take bamboo rope; 8, after transome; 9, bridle; 10, after end of bamboo rope; 11, bowman's platform; 12, the sweep. *Note.* The weight of the crew is about 3 tons, and to support this, strengthening is provided by a bamboo rope which, starting in the bow at 2, passes over the chock at 6 and follows the pecked line to 5 where it divides and is secured to the chock at 7. The main rope continues to 8 over which it passes, in the form of a bridle at 9, and thence under the counter at 10.

at this time, a concoction, called Hsiung-huang, is applied to the lips, eyes and nose to keep insects and odours away. In addition to this drive against the powers of darkness, the five venomous animals, namely, the snake, toad, lizard, scorpion and centipede, are put on the blacklist, and all rooms of the house are fumigated with a herb preparation. The spirit of the ghost-eating god is also displayed inside the house so that before nightfall all indoor evil spirits will be completely liquidated.

In course of time the boats which put out in the symbolic search for the statesman's body came to take part in races, until the Dragon Boat Festival evolved in its present form. It is now celebrated all over southern and Central China on the 5th day of the 5th moon, wherever there is sufficient water to float the boats.

The Dragon boats are especially built for the races. They are of unique design, long and narrow, and each is provided with an ornate dragon's head in the bow and a tail at the stern. The boats vary very much in size. That illustrated on page 129, which is typical of the Yangtze, measures 60 ft. with a beam of 5 ft. It is strengthened by 18 bulkheads and carries a crew of 36 men, sitting in pairs on the gunwale, who each wield a short paddle.

From a nautical research point of view the Dragon Boats are extremely interesting, for in the first place they are not typically Chinese boats at all, but Indonesian in design.

This long canoe-like type of craft is used to-day in Indo-China and on the southern mainland of China as far north as Kiangsu. On the Yangtze the same type is almost universal and is fairly standard in size. In the Shanghai area the boats are very much shorter and with very much greater beam. At some of the coastal ports the boats are very much longer and narrower. Here a length of 113 ft. with a beam of $3\frac{1}{2}$ ft. is quite common.

The use of paddles in propelling them is most significant, for it is not the usual Chinese method of propulsion. On the other hand, it is typical of the whole of the Borneo, Malayan and Indonesian region. These facts, coupled with the scattering of rice upon the waters, suggest that the festival belonged to the cultivators of rice and was held with the object of ensuring a bountiful crop. This may account for its not being prevalent in North China.

At Amoy, Foochow, Canton and Hong Kong the races are particularly spectacular. They differ slightly. Regal displays are held on the T'ai Ho at Soochow; swift races of long, slim shells at Ichang, descending to impromptu splashings about in sampans in Western Szechuan.

Many of the myths and legends quoted above belong to the old China, the China that is fading away. Some may seem superstitious nonsense, but, nevertheless, they well repay study and are important as a background and for throwing valuable light on the Chinese attitude to life.

Officially this ancient festival is no more existent. Under Government order abolishing the lunar calendar, there is technically no 5th day of the 5th moon and, therefore, no Dragon Boat Festival. But China is a very conservative country.

GREAT BRITAIN AND THE GROWTH OF THE RUSSIAN NAVY IN THE EIGHTEENTH CENTURY

By M. S. Anderson

THE strength and efficiency of the Russian navy in the eighteenth century fluctuated considerably, and not until the latter decades of the century was its status really assured. Throughout this period, however, Englishmen and Scots, Irish and Welsh, contributed to its uneven and sometimes painful growth. Under Peter the Great they helped to create it. Under his indifferent and apathetic successors they helped to maintain it. Under Catherine the Great they helped to expand it and to establish it securely as a permanent feature of Russian life. At no time during the century did they fail to play a part of importance in the naval history of Russia.

In general, Britain assisted the growth of the Russian navy in three ways. In the first place, British shipbuilders and skilled workers of many kinds helped to construct and maintain the ships which composed it. Secondly, British subjects served on many of these ships, and throughout most of the century supplied a large proportion of the higher-ranking officers in the Russian navy. Finally, Russian officers and seamen, sometimes in considerable numbers, received part of their training on British men-of-war, or more occasionally on East Indiamen. Of these three types of assistance, the second is the most noticeable and the easiest to describe, since the careers in Russia of such men as John Elphinston, Samuel Greig, and Sir Charles Knowles attracted a good deal of attention and comment from their contemporaries. The activities of obscure shipwrights in Archangel or Kronstadt aroused by contrast little interest, and the training in the British navy of officers from friendly foreign states was not unusual enough to call for much comment. Yet it seems at least possible that in the long run the presence in Russia of numbers of British officers contributed little more to the development of a powerful navy there than the other two factors involved. In particular, the extent and importance of the training given to Russians in the British navy is hard to evaluate with any precision.

Peter I, on his return from England in 1698, brought with him a considerable number of the skilled workers essential to the development of

a navy, and above all a number of shipbuilders.¹ The most important of these, John Deane, was a son of Sir Anthony Deane, one of the greatest of seventeenth-century English naval architects. He died at Moscow in the following year,² but other English shipbuilders, such as Cozens and Nye, were ready to take his place. To the first Russian navy, that constructed on the rivers of south Russia in the years 1696–1711, and sold, surrendered or destroyed by Peter after his defeat by the Turks in 1711, had deprived Russia of an outlet to the Black Sea, British builders made a substantial contribution.³ It was, however, the work of Dutch and Danish rather than British shipbuilders.⁴ Not until the last decade of Peter's reign did Englishmen and Scots play in the construction of his fleet a part greater than that of the Dutch, and as late as 1715 it could be alleged that 'such is the Zeal of your [i.e. Dutch] Merchants, in supplying that Prince with Ships, Officers, Arms, and Money, at all Hazards, that it may truly be call'd a Dutch, and not a Muscovite Fleet, that now makes War upon Sweden'.⁵

This view was already out of date, however. Between 1712 and the Tsar's death in 1725 at least twenty ships were constructed for the Russian Baltic fleet by English or Scottish builders,⁶ and by 1719 George Jefferyes, the British representative at St Petersburg, could report that there were no Dutch builders left either there or at Reval.⁷

As well as shipbuilders, skilled workers—mast-makers, block-makers, riggers, boatbuilders, joiners, anchor-smiths—were attracted to Russia from England and Scotland. A considerable number of them were at work in the early eighteenth century, both in the Don shipyards and in those

1 A list can be found in *The History of the Russian Fleet during the Reign of Peter the Great, by a Contemporary Englishman*, ed. Sir C. A. G. Bridge (Publications of the Navy Records Society, London, 1899), Vol. xv, p. 5.

2 N. Luttrell, *A Brief Historical Relation of State Affairs* (Oxford, 1857), Vol. iv, p. 535. Dr R. C. Anderson, in his valuable 'British and American Officers in the Russian Navy' (*Mariner's Mirror* (1947), Vol. xxxiii, pp. 17–27), appears to confuse him with some other Englishman of the same name.

3 Of 123 ships of all types laid down at Voronezh for the Black Sea fleet during this period, at least 10 were designed by British builders (F. F. Veselago, *Spisok Russkikh voennykh sudov v 1668 po 1860 god* (St Petersburg, 1872), pp. 442–52). A list of British shipbuilders at work on the River Don in 1710 can be found in Charles Whitworth, *An Account of Russia as it was in the year 1710* (Strawberry Hill, 1758), pp. 142–3, 145. (The author was British envoy and later ambassador to Russia in the years 1704–1712.)

4 Deane, in his *Letter from Moscow...relating to the Czar of Muscovy's Forwardness in his Great Navy* (London, 1699), noted the predominance in the yards at Voronezh and elsewhere of Dutchmen and Danes.

5 *Reasons for the Present Conduct of Sweden...set forth in a Letter from a Gentleman at Dantzic to his Friend at Amsterdam* (London, 1715), p. 15.

6 Veselago, *op. cit.*, *passim*.

7 To James Craggs, Secretary of State for the Southern Department, 16 July 1719 (O.S.), *Sbornik Imperatorskogo Russkogo Istoricheskogo Obshchestva*, Vol. lxi, pp. 562–5.

where the embryo Baltic fleet was taking shape.¹ In 1712, for example, two English experts were sent to prepare ship timber at Kazan on the Volga, the centre of the best oak-producing region of Russia.² Even very strained Anglo-Russian relations in the last decade of the great Tsar's reign did not prevent a steady movement to Russia of such workers, often much to the annoyance of their employers at home.³

After Peter's death the fleet, always unpopular in Russia, was consistently neglected for nearly four decades, but Englishmen, and still more Scots, maintained and greatly increased their influence on such maritime development as took place. The decline in the number of Dutch technicians and shipbuilders at work in Russia meant that, from the 1720's onwards, British influences became of dominant importance in the history of the Russian navy. These influences, though slowly declining, lasted in some respects even into the nineteenth century. The generation following the death of Peter saw the importance of British shipbuilders reach its peak. The growth, extent, and eventual decline of their activity can best be seen from the following table:⁴

	Total built	Built by British shipbuilders
Baltic fleet		
Ships of the Line		
1708-1725	54	20
1726-1750	41	21*
1751-1775	61	27
1776-1800	61	16†
Frigates		
-1725	31	3
1726-1750	11	7
1751-1775	22	10
1776-1800	32	2

* One in co-operation with a Russian.

† Six in co-operation with Russians.

1 Whitworth, *op. cit.* pp. 146-9; 'List of the English in the Czar's service in 1705', British Museum Additional MSS. 37354, fols. 278-9. 2 *Russian Fleet*, p. 20.

3 See, for example, the complaint of a number of shipwrights that they were losing valuable workers by emigration to Russia, Sweden, and the colonies, in *Journals of the Commissioners for Trade and Plantations* (London, 1920-38), under 9 December 1724.

4 Veselago, *op. cit.*, *passim*. The fact that all foreign names are given in this list in Cyrillic transliterations and that Christian names are not given, sometimes makes it difficult to decide definitely the nationality of a particular builder. However, apart from one or two doubtful cases (mainly in the earlier years of the century), the figures given are probably fairly accurate. A list of the ships making up the Russian fleet in 1728, with indications of those constructed by British shipbuilders, can be found in *Sbornik*, Vol. LXVI, pp. 621-4. A similar list for 1746 is in *ibid.* Vol. CIII, pp. 9-11.

British builders thus produced, in the second quarter of the century, half the ships of the line and nearly two-thirds of the frigates which composed Russia's Baltic fleet. In the third quarter they were responsible for nearly half of each class, and not until the reign of Catherine II did this relative importance decline really sharply, as Russia began at last to produce her own shipbuilders and naval architects in adequate numbers. Englishmen and Scotsmen—Brown, Hay, Sutherland, Ramsey, Yeames—also built in the middle decades of the century considerable numbers of smaller craft—bomb-vessels, pinks, prames, brigantines—for use in the Baltic. They were never concerned, however, with the construction of the galley-fleet, Russia's most dangerous weapon in the amphibious warfare which Baltic conditions demanded. Nor did they (with one notable exception to be described later) play a part of great importance in the development of the Russian Black Sea fleet after 1774, or in the construction of the small Caspian flotilla from 1778 onwards.¹

On the other hand, there are some indications that in the 1770's and 1780's a number of young Russians were sent to study shipbuilding in English dockyards. Samuel Bentham, who will be discussed in more detail in another part of this article, had one as a pupil in 1779, though he was not highly impressed by his abilities.² Some years later at least eight or nine others were being instructed in Britain.³ Moreover, perhaps the most important source of naval guns in Russia from the late 1780's onwards was the foundry at Olonets near Lake Ladoga, set up in 1787 by an Englishman, Charles Gascoigne. A member of the famous Carron Company of Ironfounders, Gascoigne came to Russia with the connivance of the British government and against the opposition of his associates,⁴ and brought with him a number of skilled workers. He achieved great and rapid prosperity, and from the first his establishment became an important producer of artillery for the Russian army and navy.⁵ It was indeed with this in view that Catherine II had persuaded him to take the hazardous

¹ Though at least one British officer was serving as a Lieutenant on the Caspian in 1783 (G. Forster, *A Journey from Bengal to England through the northern part of India...and into Russia by the Caspian Sea* (London, 1798), Vol. II, p. 264), and thirteen others were transferred thither in that year (S. Shairp (Consul at St Petersburg) to C. J. Fox (Secretary of State for Foreign Affairs), 30 September 1783, No. 6, Public Record Office, Foreign Office, Russia, F.O. 65/11).

² To his father, Jeremiah Bentham, 9 May 1779, Add. MSS. 33538, fol. 323.

³ Count S. R. Vorontsov (Russian Ambassador in London) to his brother Count A. R. Vorontsov, 4 March 1788, *Arkhiv Knyazya Vorontsova...bumagi Grafa M. L. Vorontsova* (Moscow, 1870-95), Vol. IX, p. 116.

⁴ Samuel Greig to Count S. R. Vorontsov, 26 February, 6 June 1786 (O.S.), *Arkhiv Knyazya Vorontsova*, Vol. XIX, pp. 339-41, 343-4.

⁵ Catherine II to Prince G. A. Potyomkin, 30 July 1787 (O.S.), *Sbornik*, Vol. XXVII, p. 240.

step of emigration. If, therefore, the direct importance of British technical knowledge in the development of the Russian navy declined in the later eighteenth century, its indirect effects remained very considerable.

British officers as well as British shipbuilders and technicians contributed on a large scale to the growth of the Russian fleet under Peter I. For some time the Tsar's efforts to attract to his service officers from the British navy met with only modified success. Until the end of the war of the Spanish succession in 1713 he had little chance of obtaining much help from this source. Even after the end of hostilities had made available large numbers of unemployed half-pay officers, not all of them were willing to exile themselves, even temporarily, to so remote and unattractive a country as Russia.¹ This reluctance was increased by the fact that the rates of pay offered them were not in general very attractive, and that the regularity with which they were paid often left a good deal to be desired.

Undoubtedly Peter was willing, on occasion, to offer good terms in order to attract able officers to his service, as can be seen from his negotiations with Captain George Paddon in 1715. Paddon, who had been dismissed from the British fleet in the previous year, demanded a salary of £700 p.a. (half or a third of which was to be paid before he left England), free quarters for himself and his family, provision for his wife and children in case of his death, the right to bring his own doctor, chaplain and secretary, and the right to have eight personal servants on board his ship. Most of these conditions were agreed to, and Paddon entered the Tsar's service in 1717.² However, the lack of money from which Peter continually suffered meant that promises of this kind often were not kept, and this inevitably bred discontent and bad feeling. Thus, in 1713, Captain Andrew Simpson, commanding the frigate *Svyatoy Mikhail*, one of three newly launched at Archangel, refused to put to sea until he had received 1336 roubles owed him. He was pacified only by being given command of this little squadron.³ Some recruits were nevertheless obtained,⁴ their numbers being swollen after 1713 by the end of the war with France, and after 1715 by Jacobite

¹ *Russian Fleet*, pp. 96-101.

² *Arkhiv Knyazya F. A. Kurakina* (St Petersburg, 1890-1901), Vol. III, pp. 20-3. Though he died at the end of 1718 or early in 1719, Paddon appears to have been a valuable acquisition (F. F. Veselago, *Ocherk Russkoi morskoi istorii* (St Petersburg, 1875), Vol. I, pp. 306-7).

³ P. Kuzmischov, 'O voennykh korablyakh otpravlennykh iz Arkhangelska v 1713 god', *Morskoy Sbornik* (1853), Vol. IX, pp. 383-5.

⁴ *Russian Fleet*, p. 30 (four captains, some lieutenants and surgeons in 1714), p. 56 (two captain-commodores, a captain, and two captain-lieutenants recruited by Peter on his visit to Holland in 1717). At least four of the Russian ships which fought the Swedes at Gangut in 1714 were commanded by British officers (R. Skalovski, 'Voennaya destviya Russkogo Flota v 1714 godu', *Morskoy Sbornik* (1851), Vol. V, p. 381).

refugees.¹ However, until the end of Peter's reign the Dutch and Scandinavian elements in his fleet were probably little if at all less important than the British.²

From the 'Northern Crisis' of 1716 until the Tsar's death in 1725 Anglo-Russian diplomatic relations were almost always bad. This fact, though it did not halt the flow of British officers to Russia, probably slowed it down somewhat. The re-establishment of good relations in 1727 meant that Englishmen and Scots began to enter the Russian fleet in increasing numbers, and henceforth references to them, in travellers' accounts of the country and in diplomatic correspondence, multiply rapidly. During the 1730's, 1740's and 1750's the natural hostility of most Russians to the new-fangled and unpopular navy, suppressed by the iron hand of Peter I, was given free play by the Empresses Anna and Elizabeth and their corrupt and inefficient ministers. In this atmosphere of dislike and indifference Russian sea-power might have ceased to exist on any significant scale but for the leadership and exertions of British officers. In the Russo-Turkish war of 1736-9, for example, many of the small craft built on the rivers of south Russia for use against the Crimea had British commanders.³ The squadrons which cruised each summer in the Gulf of Finland for training purposes were frequently commanded by British officers.⁴ The fortifications of Kronslot were the work of an Englishman, Commodore Lane.⁵ The capture of Memel from the Prussians by the Russian army in July 1757 was greatly assisted by a simultaneous naval attack on the city by a squadron commanded by a Welshman, Vice-Admiral William Lewis, who had been in Russian service since 1725.⁶

More than a generation of official neglect and popular hostility was bound, however, to have serious effects. On her accession in 1762 Catherine II found herself in possession of a fleet for the most part poorly manned, poorly trained and poorly equipped. Ambitious, energetic, almost morbidly anxious to stand forth in the eyes of western Europe as the regenerator of Russia and a model of enlightened rule, she was determined to alter this position. In the short run at least this could be done only by renewed and

1 For example, Lord Duffus, who entered Russian service in 1722 as superintendent of the dockyard at St Petersburg.

2 Of the eighty-two officers listed in *Russian Fleet*, pp. 128-30, twenty-three are British, against seventeen Danish-Norwegian and thirteen Dutch. Nineteen are Russian.

3 C. Rondeau (Minister to Russia) to Lord Harrington (Secretary of State for the Northern Department), 23 January 1737, 25 February 1738 (O.S.), *Sbornik*, Vol. LXXX, pp. 99, 279.

4 Rondeau to Harrington, 15 July 1738, 18 March 1739 (O.S.), *ibid.* pp. 329, 524.

5 Rondeau to Lord Townshend (Secretary of State for the Northern Department), 10 July 1729, *Sbornik*, Vol. LXVI, p. 59. This officer is not mentioned in Dr Anderson's list.

6 J. Towers, *Memoirs of the Life and Reign of Frederick the Third* [sic] *King of Prussia* (London, 1788), Vol. II, p. 97.

increased imports of foreigners. The strained relations then existing between Russia and France, and the unmistakable decline of the Dutch navy, meant that a high proportion of these had to be drawn from Britain. The British government, anxious to prevent any recovery by France of the influence she had enjoyed at St Petersburg in the later 1750's, was only too anxious to co-operate.

Thus we find at least thirty British officers entering the Russian navy in the years 1764-1772, their ranks varying from midshipman to admiral,¹ and infusing into its upper ranks an element of professional expertise and fighting spirit too long unknown there. The complete lack of Russian officers with experience of command in large-scale naval operations made Catherine particularly anxious to acquire from abroad men capable of leading and controlling a fleet, though in this she had only partial success. In 1770 she succeeded in attracting to her service Admiral Sir Charles Knowles, the highest-ranking British officer ever to join the Russian navy. Her anxiety to secure this important prize is evident in the generosity of the terms she was willing to offer him.² However, Knowles, a man of nearly seventy, was employed mainly in ship-building on the rivers of south Russia, and was allowed to resign in June 1774.³

Catherine's efforts to strengthen her fleet were soon to bear spectacular fruit when, in 1769-70, three Russian squadrons circumnavigated Europe from the Baltic to the Levant, and in July 1770 annihilated the Turkish fleet at Chesmé on the coast of Asia Minor. This exploit, extraordinary in view of the state of the Russian navy only a few years earlier, was made possible by the attitude of the British government. It provided dock and repair facilities of all kinds in British ports for the often unseaworthy Russian ships. It permitted the Russian government to hire in Britain a considerable number of merchant vessels for use as transports.⁴ It sup-

1 A. Sokolov, 'Admiral Noul [i.e. Knowles]', *Morskoy Sbornik* (1849), Vol. II, p. 511. Only nineteen of the names given here are in Dr Anderson's list, which, however, mentions several others apparently unknown to Sokolov—a good example of the difficulty of attaining completeness in a matter of this kind. In addition, twenty-three Danes were recruited in the years 1769-71, and four Italians in 1769-72. It is worth noting that only two Dutch officers seem to have entered the Russian navy during this period, in 1771 and 1774.

2 He was given a salary of 10,000 roubles against the 3600 normal in the Russian navy for officers of his rank (Sokolov, *loc. cit.*, p. 513; cf. *Scots Magazine* (1770), Vol. xxxii, pp. 568-9).

3 *Scots Magazine* (1774), Vol. xxxvi, p. 383. A fairly detailed account of Knowles's years in Russia can be found in the 'Biographical Memoir' published in the *Naval Chronicle* for 1799 (Vol. II, pp. 265-82). Sokolov's article is essentially a translation, with critical comments, of this memoir.

4 Samuel Standidge, a merchant of Hull interested in the Arctic whale fisheries, was particularly helpful to the Russians in this respect. He allowed them to hire three of his own ships, and acted as their agent in the hiring of others (*Naval Chronicle* (1799), Vol. II, pp. 124-5).

plied, in Minorca, a useful advanced base and rallying point for the Russian ships after their somewhat disorderly progress through the Bay of Biscay and the Straits.¹ A good deal of the credit for the success of the expedition, however, must go also to the British officers on board, to John Elphinston, who commanded one of the three squadrons concerned, to Samuel Greig, and to Lieutenants Robert Dugdale and Thomas Mackenzie, who commanded two of the fireships whose attack on the Turkish fleet proved so unprecedentedly effective.² All of these had joined the Russian navy since the beginning of Catherine's reign.

The career of Greig is perhaps the best illustration of the enlarged opportunities which service in Russia could offer to a young man endowed with ability, energy, and a thick skin. Born in 1735 at Inverkeithing in Fife, without family influence of any kind, he had before entering Russian service in 1764 been merely a master's mate in the British navy. By 1769, however, he was a Commodore, and in 1770-2 acted as Captain of the Russian fleet in the Mediterranean. Vice-Admiral in 1775, he was promoted to Admiral in 1782. In his last years (he died in 1788) he was the recognized doyen of British and particularly Scottish officers in Russia, and in some ways a figure of international importance.³ Mackenzie too has his niche in history, though a smaller one, as the founder of the naval base of Sebastopol.⁴

Such successes naturally stimulated Catherine to continue her policy of importing officers from Britain. The war of American Independence, and the notable cooling of Anglo-Russian relations which followed the formation of the Armed Neutrality in 1780, temporarily halted the flow, but with the coming of peace it was resumed on a larger scale than ever. On 7 September 1783 no less than thirty-eight British midshipmen and officers arrived in a body at St Petersburg, and there were rumours that still more were to come.⁵ Flying at higher game, Catherine had a few months earlier attempted unsuccessfully to secure the services of Rodney himself, or failing him, of Sir Samuel Hood, Commodore John Elliott, or some other

1 Further details on most of these points can be found in M. S. Anderson, 'Great Britain and the Russian Fleet, 1769-70', *Slavonic and East European Review* (1952), Vol. xxxi, pp. 148-63.

2 Two interesting letters of Mackenzie describing the battle were printed in the *Middlesex Journal* and the *General Evening Post* for 25-27 September 1770.

3 See his obituary in the *London Chronicle*, 8-10 January 1789.

4 'Materyaly dlya istorii Russkogo flota, Admiral D. N. Senyavin', *Morskoy Sbornik* (1855), Vol. xv, pp. 129-36. A monument to him was erected at Sebastopol shortly after his death (*Archivo del General Miranda*, Vol. 11, *Viajes per Grecia, Turquia y Rusia* (Caracas, 1929), p. 232).

5 Shairp to Fox, 9 September 1783, No. 1, F.O. 65/11. The French ambassador, the Marquis de Vêrac, was told that 140 in all were expected. See his despatch to the Comte de Vergennes of 23 September 1783, No. 48, in the archives of the French Foreign Ministry, *Correspondance Politique, Russie*, Vol. cxi.

officer 'of high rank and high reputation'.¹ In spite of this failure, and of the disappointment of some of the new recruits with the conditions they found in Russia,² a steady influx of British officers continued during the 1780's and to a lesser extent in the 1790's.³

The naval wars which Catherine found herself fighting simultaneously in 1787-90 against Sweden in the Baltic and in 1787-92 against Turkey in the Black Sea showed clearly the value of her British recruits. At the battle of Hogland in July 1788, the most important of the war against Sweden, five of the seventeen ships in the Russian line of battle had British captains, and Greig was commander-in-chief.⁴ Indeed the latter, who died on board his flagship in October while blockading the Swedish naval base of Sveaborg, has a good claim to be considered one of the heroes of the war on the Russian side.

At the same time, on the newly-won Black Sea coast of Russia, the most interesting of all the Englishmen who visited the country in the eighteenth century was giving valuable help in the development of a squadron capable of facing the Turkish fleet. This was Samuel Bentham, who was later, after his return home, to make himself famous, respected, and unpopular as Inspector-General of Naval Works. Bentham, who had been in Russia since 1779, had received a thorough training in shipbuilding at Woolwich and Chatham, and was certainly a mechanical genius. Since September 1783 he had been a lieutenant-colonel in the Russian army, but he never held any naval rank. In spite of this, his technical knowledge and abilities led Count N. S. Mordvinov, who had since 1785 been developing the embryonic Black Sea fleet, to call on him even before the outbreak of war with Turkey for 'des plans, des idées, des inventions'.⁵ Soon after fighting began, in August 1787, he was charged with the task of arming a miscellaneous collection of small craft to face the Turks, in other words of improvising a squadron capable of acting defensively against the vastly superior Ottoman fleet.⁶

In this he was brilliantly successful. According to his own account 'Mordvinoff on all occasions asserted in the strongest manner possible that

1 James Harris (British ambassador at St Petersburg) to Lord Grantham, 28 February 1783, *Diaries and Correspondence of James Harris, first Earl of Malmesbury* (London, 1844), Vol. II, p. 36.

2 Shairp to Fox, 16 September 1783, No. 3; Alleyn Fitzherbert to Fox, 9 December 1783, No. 13, F.O. 65/11.

3 For example, those mentioned by Prince A. A. Bezborodko in his despatch of 1 September 1789 (O.S.) to Count S. R. Vorontsov, *Arkhiv Knyazya Vorontsova*, Vol. XIII, p. 161.

4 R. C. Anderson, *loc. cit.* p. 17; cf. A. Sokolov, 'Goglandskaya morskaya bitva 1788 goda', *Morskoy Sbornik* (1849), Vol. II, p. 332.

5 Add. MSS. 33540, fol. 310.

6 A. V. Suvorov to Samuel Bentham, 7 September 1787 (O.S.); Mordvinov to Samuel Bentham, 20 October 1787 (O.S.), *ibid.* fols. 401, 408.

it was through me he was enabled to drive away the Turkish fleet',¹ and his own memoranda show him hard at work building, equipping and arming ships to create an effective flotilla. In the actions of June 1788 in the Balta Liman, in which the Turks under the famous Kapudan-Pasha Hassan were severely defeated, he played a distinguished part, which was recognized by the gift of an inscribed sword from Catherine II.² However, his unpopularity, partly no doubt the product of his own uncompromising character, was such that by October he had been 'kicked out of the flotilla for peace and quietness sake'.³ By February 1789, his brief naval career over, he had been appointed to the command of a cavalry regiment in Siberia. He had, nevertheless, played, at a crucial moment, a role of considerable importance in the evolution of Russian naval strength in the Black Sea.⁴

Another Englishman holding a commission in the Russian army, Richard Fanshawe, also played an important part in the flotilla Bentham had helped to create,⁵ and in 1791, as an effective Russian Black Sea squadron began to emerge, the Empress strengthened it by the transfer from her Baltic fleet of a considerable number of British officers.⁶

On a lower level of importance, several British officers in Russian service, commanding armed sloops and cutters, established themselves in 1789 in the little port of Gluckstadt, in Schleswig-Holstein, on the right bank of the Elbe. They hoped to use it as a base from which to attack richly laden ships returning to Sweden from the East Indies.⁷ This attempt at privateering (it was little more) caused a good deal of alarm in London. The sloops and cutters involved were British built, there was reason to believe that some of them were still British-owned,⁸ and the legal and diplomatic complications of a successful attack by them on Swedish shipping would

1 To his brother Jeremy Bentham, 23 October 1788 (O.S.), *ibid.* fol. 487.

2 Prince G. A. Potyomkin to Samuel Bentham, 30 October 1788 (O.S.), *ibid.* fol. 490.

3 To Jeremy Bentham, 23 October 1788 (O.S.), *ibid.* fol. 488.

4 A general account of Bentham's years in Russia will be found in a forthcoming article by M. S. Anderson in the *American Slavic and East European Review*.

5 Detailed accounts by him of the battles of June 1788 will be found in Add. MSS. 33554, fols. 82-9.

6 Catherine to Potyomkin, 9 July 1791 (O.S.), *Sbornik*, Vol. XLII, p. 188. This movement of British officers was caused partly by the crisis in Anglo-Russian relations in the spring of 1791, which seemed for a short time likely to lead to a naval war between the two powers in the Baltic.

7 E. Mathias (Resident to the Hanse Towns) to the Duke of Leeds, 17 July 1789 and 11 August 1789; Hugh Elliott (Minister to Denmark) to Leeds, 18 August 1789, Public Record Office, Admiralty Papers, In-Letters, Adm. 1/4154.

8 In August 1789 an armed lugger formerly in the service of the British revenue authorities and believed to be still in British ownership was cruising under Russian colours off the Scilly Isles. Her captain and most of her crew were British. (Abraham Leggatt to George Brooks, 21 August 1789, Adm. 1/4154.)

have been considerable. However, the lawyers and diplomats were spared such an embarrassment, for the project petered out without effecting anything of importance.¹

British officers thus remained numerous and influential in the Russian navy in the later eighteenth century, so influential in fact that until near the end of this period it would have been almost impossible for the Russian government to use its fleet effectively against Britain.² Even in the early nineteenth century their influence remained appreciable. British surgeons, who had been numerous in Russia all through the eighteenth century, continued to be in great demand for service in the navy,³ and British officers continued to hold important commands in it.⁴ The Russian squadron sent to Britain in December 1812 for safe-keeping during the French invasion was commanded by an Englishman, Admiral George Tate, who had been in Russia for over forty years.

The help given by Britain in training Russians in navigation and seamanship was much more intermittent than the supply of officers and technicians which she provided for the Russian navy. Under Peter the Great assistance of this kind was given partly by supplying teachers (mainly mathematicians) capable of instructing in Russia the officers who were to be responsible for the navigation of Russian ships. As early as 1697 Peter had asked for a number of such teachers, and an effort had been made to supply them.⁵

Much the most important of these indispensable experts was Andrew Farquharson, a man whose influence on the intellectual development of early eighteenth-century Russia considerably transcended the bounds of merely technical training. Originally a professor at Aberdeen, he came to Russia with Peter in 1698. Like many naval officers he found that the promises made him with respect to pay were not kept after his arrival in the

1 A 'Russian row-galley' commanded by Alexander Carr, one of the officers at Gluckstadt, caused a minor incident by seizing a British ship, the *Isabella* of Banff (J. B. Burgess (Under-Secretary for Foreign Affairs) to Philip Stephens (Secretary to the Admiralty) 22 October 1789, Adm. 1/4154).

2 In May 1780, when it seemed that the formation of the Armed Neutrality might lead to a serious Anglo-Russian quarrel, Greig assured the British ambassador that he and all the other British officers in Russian service would resign if ordered to act against Britain (Harris to Lord Stormont, 26 May 1780, *Malmesbury Diaries and Correspondence*, Vol. 1, p. 307).

3 Diary of James Hall, in *Sea Saga, being the Naval Diaries of Four Generations of the King-Hall Family*, ed. L. King-Hall (London, 1935), pp. 17-18.

4 R. Johnston, *Travels through part of the Russian Empire and the country of Poland along the southern shores of the Baltic* (London, 1815), p. 89.

5 'The czar of Muscovy having sent hither for some mathematicians to instruct his people in the art of navigation, fortification etc, Mr. Brook, of the Royal Society, has orders to appoint 20 to goe thither on that account' (Luttrell, *op. cit.* Vol. iv, p. 207 (8 April 1697 (O.S.))).

country, and in 1710 was driven to complain of his poverty to Admiral Count F. M. Apraksin, president of the college of admiralty.¹ In spite of these discouragements, as one of the creators and first head of the Tsar's new school of navigation and mathematics at Moscow,² he helped to lay the foundations of a powerful Russian fleet. He was still in Russian service as late as 1737.³ As author of mathematical and astronomical tables published at Moscow in 1716 and 1722, of an edition of Euclid's *Elements* which appeared in a Russian translation in 1719, and of a text-book of plane and spherical trigonometry written about 1730, he provided Russian naval officers with some of the essential intellectual tools of their trade.⁴ He also made a distinct if modest contribution to the rapidly increasing europeanization of Russian life in this period.

The activities of Farquharson and his assistants⁵ were supplemented and consolidated by the practical training which many young Russians received, in the early years of the eighteenth century, on British men-of-war. The number of those who received such training is difficult, perhaps impossible, to establish with any accuracy. The total, however, was certainly considerable, and men with such experience must have exerted an important leavening influence on the rather unpromising human material from which the Tsar had to create the crews of his new ships.

From the beginning of the century numbers of Russians appear to have been sent to England as ordinary seamen on English merchantmen from Archangel. A few years later references can be found to the despatch of considerable numbers of young men, many of whom had already studied under Farquharson, to serve in the fleet. Thirty such, 'lusty young men and few or none under 20 years old', were sent in the summer of 1706.⁶ They were followed a year later by twenty others, and at the same time permission was unsuccessfully asked for three hundred ordinary seamen to be allowed to serve on British men-of-war.⁷ In 1708 the capture of a number of these Russian volunteers by the French raised some delicate problems regarding

1 P. P. Pekarsky, *Nauka i literatura v Rossii pri Pyotre Velikom* (St Petersburg, 1862), Vol. 1, p. 122; J. Perry, *The State of Russia under the present Czar* (London, 1716), p. 214.

2 On which see F. F. Veselago, *Ocherk istorii morskogo kadetskogo korpusa* (St Petersburg, 1852), chap. 1 *passim*.

3 J. Cook, *Voyages and Travels through the Russian Empire* (Edinburgh, 1770), Vol. 1, p. 94.

4 Pekarsky, *op. cit.* Vol. 1, p. 271.

5 In the early years of his residence in Russia he had at least two—Stephen Gwynn and Richard Gries (?) (*ibid.* Vol. 1, p. 123). Gwynn was still at work in Russia in 1716; Gries died in or before 1705 (Veselago, *op. cit.* p. 18, and the same author's *Ocherk Russkoi morskoi Istorii*, p. 593).

6 Whitworth to Robert Harley (Secretary of State for the Northern Department), 31 July 1706 (O.S.), Add. MSS. 37355, fols. 153-4.

7 Whitworth to Harley, 2 July 1707 (O.S.), *ibid.* fols. 399-401.

their exchange for French prisoners taken by the British.¹ The last years of the war of the Spanish succession also saw a steady trickle of young Russian noblemen who were accepted, often as extra midshipmen, on board British men-of-war.²

With the deterioration of Anglo-Russian relations from 1716 onwards, however, the Admiralty, which had never been willing to extend too widely the facilities granted to the Russians,³ naturally became still less willing to strengthen in this way a potentially hostile fleet. In the last years of Peter's reign the training of Russians on British ships had thus ceased, at least as a regular practice.⁴

After his death, his successors were too indifferent to the navy, and too preoccupied with internal difficulties and political intrigues, to continue any policy of this kind. Occasionally suggestions were put forward for the training of Russian seamen in Britain on a large scale, but these were not followed up. In 1738, for example, Biron, Duke of Courland, the all-powerful favourite of the Empress Anna, said he wished in case of an Anglo-Spanish war to send not only some 'young russ gentlemen' but also a thousand 'young russ seamen' to serve as volunteers on British ships.⁵ This proposal, probably not seriously meant in the first place, had no practical results.

Not until the accession of Catherine II do we find once more a real effort to return, in this respect as in many others, to policies first evolved by Peter I. Within a few weeks of her accession Catherine had asked that twenty or thirty 'young gentlemen' might be allowed to serve on British ships in the war against France. The British government did its best to satisfy her, and twenty young Russians were accepted on board British

1 See the correspondence of July–August 1708 between Henry Boyle (Secretary of State for the Northern Department) and the Commissioners for Sick and Wounded Seamen, in Public Record Office, State Papers Domestic, Naval, S.P. 42/120/41, and S.P. 44/107/68 and 95. I am indebted to my wife for these references.

2 Duke of Queensberry to the Lords Commissioners of the Admiralty, 1 and 22 September 1710 (O.S.), Adm. 1/4094; Henry St John to the same, 27 December 1711, 26 March 1712, 19 April 1712 (O.S.), Adm. 1/4096.

3 It had refused, for example, to allow a Russian officer to study shipbuilding in the royal dockyards (St John to the Lords Commissioners of the Admiralty, 2 October and 27 December 1711, Adm. 1/4096).

4 See the letter of Prince Ivan Shcherbatov to Peter I of 24 March 1719, in which he describes his unsuccessful efforts to get himself accepted on board a British man-of-war. Even the intervention of the Russian minister in London proved ineffective (Pekarsky, *op. cit.* Vol. 1, p. 244). The young Russians sent to England in October 1716 (Veselago, *Ocherk Russkoi morskoi Istorii*, p. 586) seem to have been the last to be accepted in this way in Peter's reign.

5 Rondeau to Lord Harrington, 26 August 1738 (O.S.), *Sbornik*, Vol. LXVI, p. 353. A number of Russians returned from England in 1749, apparently after receiving training in the British navy (Veselago, *Ocherk istorii morskogo kadetskogo korpusa*, p. 112).

ships in 1762.¹ In the following year six Russian officers who could not be sent to the East Indies on British men-of-war were placed instead, by a special arrangement, on ships of the East India Company.²

Perhaps this attempt to revive Peter I's policy may have been a failure,³ or perhaps it was now felt that the Russian fleet could itself provide adequate training for its officers. At all events the Admiralty records show no attempt by the Empress to repeat the experiment, and after 1762-3 the training in the British navy of large groups of Russians was abandoned as a matter of official policy.⁴

It is clear, however, that individual officers continued to be sent by their government to make use of British men-of-war as a kind of finishing school. These included several men of outstanding ability. Count N. S. Mordvinov, later the patron of Samuel Bentham, completed his professional training in the British navy in 1774-7, visiting America in the process.⁵ A few years later G. A. Senyavin, one of a notable Russian naval family, spent a still longer period on British ships and, according to his brother-in-law, worked hard, studied intensively, and gave complete satisfaction.⁶ Yury Lisiansky, famous as the first Russian captain to circumnavigate the world, prepared for this achievement by a series of far-ranging voyages under the British flag. Sent as a lieutenant to serve in the British navy in 1793, he spent most of 1794-5 on the North American station and in the West Indies on the frigate *L'Oiseau*. After travelling in America he returned to England in 1797 on the *Cleopatra*. He then went to the Cape of Good Hope in the *Raisonnable*, and thence in 1798 to Madras and Bombay. Returning to England in 1799, he regained his own country only in 1800.⁷ In the early years of the nineteenth century the idea of sending Russians to be trained in the British navy on a large scale was revived to some extent. A pamphleteer of 1805, for example, can be found protesting against a proposal to accept three hundred Russian boys as midshipmen, since this, he alleged,

¹ Sokolov, *loc. cit.* p. 510; Lord Halifax (Secretary of State for the Northern Department) to the Lords Commissioners of the Admiralty, 25 June 1762, Adm. 1/4125.

² Halifax to the Directors of the East India Company, 22 March 1763; T. Rous to Halifax, 23 March 1763, *Calendar of Home Office Papers* (1760-1765) (London 1878-99), Vol. 1, p. 270.

³ Six more Russian officers were sent to be trained at Venice in 1765 (Sokolov, *loc. cit.* p. 511).

⁴ In 1780 there were a number of Russian seamen serving on board H.M.S. *London*, but apparently they had not been sent to England by their government (W. Fraser (Under-Secretary of State) to Philip Stephens, 7 April 1780, Adm. 1/4141).

⁵ V. S. Ikonnikov, *Graf N. S. Mordvinov, istoricheskaya monografiya* (St Petersburg, 1873), p. 4.

⁶ Count S. R. Vorontsov to Count A. R. Vorontsov, 4 March 1788 (N.S.), *Arkhiv Knyazya Vorontsova*, Vol. IX, p. 116.

⁷ Urey Lisiansky (*sic*), *A Voyage round the World, in the Years 1803, 4, 5 and 6* (London, 1814), Preface, pp. xvii-xx.

would eventually lead to a dangerous strengthening of Russian naval power.¹

By that date, however, the Russian navy was too strong and too securely established to be dependent on British help as it had been a century earlier. After a prolonged and sometimes painful childhood and adolescence, it had grown up. No longer dependent on foreign states for ships or shipbuilders, able to train its own officers and men, commanded by really able Russian admirals, Ushakov and D. N. Senyavin, it could now confront the navies of most European states on a footing of equality, and was clearly superior to those of its traditional rivals, Sweden and Turkey. This status it owed in part to Russia's great natural resources in timber and metals, to the impetus given to naval development by Peter I and Catherine II, and to the Russian officers and administrators who carried out the policies of those rulers. Without British help, however, the increase of Russian naval power in the eighteenth century would certainly have been much slower. It was British officers and leadership, British technicians and expertise, and British goodwill which helped to found the Russian navy under Peter I, to preserve it under Anna and Elizabeth, and to expand it under Catherine II. Since the rise of Russia is perhaps the greatest political development in eighteenth-century Europe, those officers, shipbuilders and instructors were (for the most part unknowingly) helping to change the European balance of power.

¹ W. Hunter, *A sketch of the political state of Europe at the beginning of February 1805* (London, 1805), pp. 142-3. A year earlier Nelson had had a number of Russians serving under him in the Mediterranean. See his letter 'To the Russian gentlemen on board His Majesty's Ship *Royal Sovereign*', of 16 March 1804, in *The Despatches and Letters of Vice-Admiral Lord Viscount Nelson*, ed. Sir N. H. Nicholas (London, 1844-6), Vol. v, p. 448.

NOTES

THE RIG OF EARLY MEDIEVAL WARSHIPS

In this controversy (*M.M.* Vol. 35, no. 1, p. 51; Vol. 36, no. 1, p. 88; Vol. 36, no. 2, p. 158), which is coupled with that on 'The "Nef" Ships of the Ravenna Mosaics' (*M.M.*, Vol. 38, no. 4, p. 317; Vol. 39, no. 3, p. 226; vol. 40, no. 1, p. 76; and Vol. 40, no. 4, p. 316), the present writer, as a student of oriental nautical archaeology with some considerable practical research experience on native sailing craft east of Suez, must endorse the views of Dr Bowen.

Without wishing to enlarge the discussion he would like to reply to Dr Bowen's two questions (*M.M.*, Vol. 40, no. 4, p. 320). (1) The Ravenna Mosaics in the present writer's view show a man climbing up a ladder. To this he would add that (i) Mr Dolley's 'Forecastles' (*M.M.*, Vol. 38, no. 4, pl. I (1*a*) and (1*b*)) are non-existent as he has mis-interpreted ropes, yards and sails as the outlines of wooden structures; (ii) the sails in question are lateen sails, shown in positions characteristic of such sails and hoisted from characteristically lateen masts. (2) The ships of Grec. 510 (of A.D. c. 880) have their lateen yards hung, to all intents and purposes, from the centre. This the writer would add, in confirmation of Dr Bowen, is not inconsistent with their being, as they are, the yards of lateen sails. He would also add that this feature vindicates Mr Dolley's translation (*M.M.*, Vol. 35, no. 1, p. 52: 'they hoisted aloft those poles projecting from their middle which in nautical parlance they call yards.') At the same time he must observe that Mr Dolley's revised reconstruction of the 'assault platforms' (*M.M.*, Vol. 36, no. 2, p. 159) should embody the feature at once most characteristic of lateen craft (see *M.M.*, Vol. 38, no. 4, p. 315, and existing lateen-rigged craft in Levantine and Oriental waters) and most conducive to the effective rigging of 'assault platforms', namely, steeply canted mainmasts (i.e. the foremost masts in lateen-rigged craft with more than one mast). On whether Mr Dolley is literally correct in translating the Greek into: '... by means of the foremost slings they hoisted aloft those poles... called yards...' the present writer, knowing no Greek, is unable to express an opinion, but as a seaman he must point out that the English is incorrect. A yard was slung from 'slings', hoisted by 'halyards' (but lateen yards are not, and probably never were, 'slung'); Mr Dolley's 'foremast slings' should therefore be rendered either in the form of 'fore-halyards' or of 'fore-most halyards'. If this were done the sentence quoted above would read, either '... by means of the fore-halyards they hoisted aloft... yards', or '... by means of the fore-most halyards (i.e. the main halyards of lateen rigged ships) they hoisted aloft... yards...'. Whichever be the correct rendering of the literal translation from the Greek, both the evolutions so described are intelligible and consistent with practical seamanship. All which goes to show how hard is the way of the nautical archaeologist seeking to interpret the past or to re-create it. To the discipline of the scholarship of 'the schools' he must add the discipline of the sea and of sea speech—the *Accidence* and *Grammar* of sea-men, and their vocabulary—for, as becomes what is probably the oldest occupation to put scientific discoveries, under hazardous circumstances, to practical use, the language of sea-faring is one of great precision. Necessarily so also, for ambiguity or obscurity of expression or intention may even involve swift and sudden disaster.

D. W. WATERS

FURTHER NOTE ON THE SYRIAN SCHOONERS

Reference my note on the Syrian schooners on pages 314-15 of Vol. 40 of the *Mariner's Mirror* Mr C. L. Barker has now sent a further selection of his photographs of these vessels to the National Maritime Museum. These photographs show the following new features, in addition to those previously recorded. A Syrian schooner before the wind will sail with her main and foresails on opposite sides in the manner adopted by American schooners at some periods and places and sometimes described by their crews as sailing 'winged out'. Later rigged vessels sometimes adopt

a similar system of sheeting their sails on opposite sides when running. Mr Barker's photographs show the use of a boom to extend the foot of the foresail when sailing before the wind in this way. This boom appears to be a lighter spar than the mainboom, and the foot of the sail does not appear to be laced to it. Sidecloths appear to be used fairly extensively. What might perhaps be described as a main topmost staysail is sometimes set above the ordinary working main staysail. Mr Barker's photographs show from one to three rows of reef points on main and foresails. They all show vessels with bowsprits and separate jibbooms with attendant headgear, but some modern models of these schooners made on Ruad Island are fitted with bowsprit and jibboom in one piece.

Mr E. Jacomb-Hood has drawn my attention to the very good description of Ruad on pages 73-76 of 'Syria—An Historical Appreciation' by Robin Fedden (Robin Hale, 1946). This book contains among its illustrations a magnificent aerial photograph of Ruad which shows eleven schooners, four of them hove down, and, with reference to the last paragraph of my previous note on this subject, three brigantines at anchor and one hove down on the beach. Among Mr Jacomb-Hood's own photographs is one taken in Latakia in 1948 which shows seven large Syrian schooners in the harbour. Another, taken on Ruad in 1949, shows a schooner under construction on the beach.

BASIL GREENHILL

KNOTS PER HOUR

In recent issues of this *Journal* the use of the expression 'knots per hour' has been the subject of controversy. Some contributors have criticized adversely those who use as well as those who used the expression, others have rallied to their defence. As the subject was first raised with a request for clarification, it would seem timely to attempt this.¹

In the course of the discussion, examples were given of the use in both British and American nautical circles of the term 'knot' as a unit of distance, and of the expression 'knots per hour' as a unit of speed. It was pointed out that 'the use of the knot as a unit of speed rather than distance is relatively new', and Bowditch was cited as a highly esteemed (American) navigational authority who used the expression 'knots per hour' for over three-quarters of a century—from 1802 to 1881.² At the same time attention was drawn to the fact that a British admiral, writing c. 1820, 50 specifically corrected one of his MS. entries into the form of 'knots Pr. hour', an expression which he used elsewhere and which was castigated by one of the controversialists as 'quite incorrect'. Another British admiral of the nineteenth century, it transpired, not only used the expression but went so far as to inculcate it into his contemporaries and the rising generation by publishing 'A table for converting Admiralty knots into Statute Miles' (an act calling down upon his head the severest censure of a modern seaman). Nevertheless, the same admiral, as if to make doubly sure of his intentions, also provided a formula for finding 'the speed of a paddle wheel in knots per hour', a labour described as a 'lapse' by his modern critic.³ Another modern authority explained that 'a "knot", when used as a measure of speed, was not a nautical mile of 6000 feet, but a length of 50 feet on the log-line—assuming that a 30-second glass was used', and on this definition proved that the expression 'knots per hour' was absurd.

Users of the expression were (with all due respect) accordingly condemned as having been wrong. The term as a measure of acceleration was also shown to be absurd. Finally the point was made, is 'in these days of patent logs, a "knot" a measure of speed or a measure of distance?' and again, 'Does the modern seaman speak of . . . distance . . . as . . . "knots" . . . ?'⁴

Nautical terms are characterized by conciseness and precision; nautical phraseology is usually functional in origin. Consequently, a change in the significance of a phrase can generally be traced to a change of function, of procedure, or of one or more of the agents involved in the phrase. The expression 'knots per hour' is, in this respect, a gem of the first water.

1 *Mariner's Mirror*, Vol. 39, no. 2, May 1953, p. 146.

2 *Ibid.*, Vol. 39, no. 4, Nov. 1953, p. 312.

3 *Ibid.*, Vol. 40, no. 2, May 1954, p. 151.

4 *Ibid.*, Vol. 40, no. 3, Aug. 1954, p. 238.

The seamen who used the expression 'knots per hour'—and their name is legion—did but speak the language of their day as it reflected one of their current practices. To them it was a perfectly comprehensible expression which conveyed with admirable brevity the whole lengthy process of measuring and recording their ship's speed and distance run with the instruments most usually provided for those two purposes.

Without examining in detail the origin and history of logs and log-lines, the following statement should help to clarify the origin, use, and abuse of the term 'knots per hour'.

The log and log-line was an English invention of the latter half of the sixteenth century. It was introduced as a means of enabling navigators to measure the distance that was sailed by a ship in a given time, and hence to estimate the distance that had been sailed by the ship in a longer period of time under similar conditions of wind, sea and sail. It was a distance meter, because, what interested navigators in the days of sail when speed was unpredictable was distance sailed and, hence, distance to be sailed.

The log was a board attached to the log-line. The function of the log was to remain stationary in the sea from the moment it was thrown overboard. The log-line was unreel from the log-reel and veered out over the stern of the ship at a rate equal but opposite to that of the ship's forward motion. Thus the distance, at any given moment, between the log and the ship's taffrail was the distance the ship had sailed since the log entered the water. (In practice various corrections were made, but these can be ignored in this context.)

The log-line was a long thin line, originally in the sixteenth and early seventeenth centuries quite plain—no knots in it. Usually the distance sailed in half a minute was measured, but it was quite common to use a minute glass, this being done, as a general rule, at the end of every 2 hours. After the log had been thrown and the log-line paid out over the stern for, say, half a minute, the log was hauled in, the length of line that had been paid out being measured in fathoms as the log-line was hauled in. This distance (or length) was logged in fathoms against the hour at which it was measured—the fact that it was the distance sailed in half a minute at that hour was not noted, it was understood.

At the end of a watch, or of a 24-hour period the number of fathoms logged was added up. If it was desired to find the distance sailed in a day and the log had been thrown every 2 hours, the twelve 2-hourly 'fathoms' entries were added up, multiplied by 120 (if a half minute— $\frac{1}{120}$ th hour—log-glass had been used) to convert the total of fathoms into distance in fathoms sailed in 12 hours, and the sum was then doubled to give the distance sailed in 24 hours. Divided by 2500, the number of fathoms generally considered to be in a league, the quotient (leagues) and remainder (fathoms) were logged as the distance, in leagues and fathoms, sailed in the preceding 24 hours, e.g. as '13 leagues and a halfe, and 90. fadames', as William Bourne explained in *A Regiment for the Sea*, of 1574.

As the whole process was done by multiplication and long division at a time when many educated men still regarded cyphering as a black art, many navigators preferred to spit over the side and guess the distance sailed!

Thus, in the period before the introduction of the knotted log-line, we find that masters logged their estimated distance run in a given period, for instance, as did Captain Antony Hippon in 1612, as, 'From the one and twentieth at noon to the two and twentieth at noon we . . . ranne fifeene leagues by the logge.' It will be noticed that Captain Antony Hippon used his log not to record his speed but to compute his distance run. Yet, if we take his entry literally, he was quite incorrect in stating that 'by the log he ran fifeen leagues' in 24 hours. By the log he ran, every 2 hours, a little less than 14 fathoms in half a minute. From this he *calculated* that in the space of 24 hours he ran 15 leagues. The purist who condemns 'knots per hour' must condemn the seaman of the pre-knotted log-line era for logging his distance run in leagues with the term 'by the logge'. Thus, too, Richard Norwood, a most competent navigator, a brilliant teacher (he taught Sir Henry Mainwaring his navigation), and the author—amongst other works—of *The Seamans Practice* (1637), must be condemned for writing 'the distance run is found by itself by the log-line'. And he it was, incidentally, who first recommended in *The Seamans Practice* the use of a progressively knotted log-line.

The knotted log-line was a development of the 1620's—itself the result of the mathematical developments of the preceding quarter of a century, particularly of the invention of logarithms. At first the log-line was marked, at each successive 7- or 14-fathoms length, with a single knot. If a half minute log-glass were used the knots were spaced 7 fathoms apart, if a minute glass were used the knots were 14 fathoms apart, each length being recognized as being respectively approximately $\frac{1}{120}$ th and $\frac{1}{60}$ th of the length of a sea mile of 5000 ft. (because 3 miles = 1 league = 2500 fathoms; $3 \div 2500 \text{ fm} = 833.3 \text{ fm.}$; $7 \text{ fm.} \times 120 = 840 \text{ fm.}$).

This knotting of the log-line facilitated both measuring the length of log-line veered (the distance sailed) in a minute or half minute and calculating the estimated distance that had been sailed in an hour, watch or day. In the first place, only a short length of line had to be measured in fathoms—the length of line between the taffrail and the last knot veered out; secondly, the rest of the length veered could be counted up in 'knots' according to the number veered; in the third place, the length or distance so measured in numbers of knots was known to be proportionate to the like number of sea miles sailed in one hour, and so a great deal of calculation was avoided. As Edmund Gunter, the first exponent of the single knotted log-line, put it in *De Sectore et Radio* (1623):

'As the time given, is to an hour
So the way made, to an hours way.'

So in or shortly before the 1620's began that practice of logging in knots (and fathoms) the distance sailed, a practice which was to remain current in the best of navigational circles until superseded by the different technique involved in the use of the Patent Logs of the latter part of the last century and of the present century.

As already indicated, the log in the sixteenth century, and for the next two and a half centuries, was commonly thrown every 2 hours, but some navigators preferred to throw it every hour.

Every noon in a well-regulated ship the master and his mates, whether they had made an observation or not, called for the log-board. The log-board was of wood and measured some 3 feet high by 15 inches wide. In a ship in which the log was thrown every 2 hours the board was ruled into five columns and thirteen lines. The top line contained the column headings, namely, *Hours, Knots, Fathoms, Courses, Rhumbs*. The twelve lines were numbered in the hour column from 2 to 12 and again from 2 to 12 to cover the 24 hours of a day. In the succeeding columns were logged, in knots and fathoms, the length of log-line veered out—which measured the distance sailed—in a half minute, after the log had been thrown at each 2-hour interval.

When the log-board was presented to the master he transferred its entries to the log-book and then proceeded to add up the number of knots and the number of fathoms logged since the previous noon. If the log had been thrown only every 2 hours, in order to find the day's run, he doubled the total of knots and fathoms arrived at, converting the total of fathoms into knots (on the basis of 7 fathoms equalling 1 knot when a half minute log-glass was used) and adding the result to the total of knots already achieved. The result was entered in the log-book and sometimes in the traverse book as 'knots' and 'fathoms' sailed in the period. Inevitably in transferring the entries from the log-board to the log-book the entries on the log-board were referred to as 'knots' and 'fathoms'. Indeed, the log-board and log-book recorded in knots (and fathoms) only distance sailed. 'Look how many knots are veered out in half a minute, so many miles is the ship's way for an hour', wrote Richard Norwood. Thus the log-board and log-book showed that the ship had sailed '*So many knots in half a minute at each hour*', or, in other words: '*So many knots in half a minute per hour*'. The fact that it was common knowledge to the navigators that a knot (a length of 7 fathoms) sailed in a given space (half a minute), or a knot (a length of 14 fathoms) sailed in a given space (1 minute) resulted in a mile being sailed in 1 hour—if that speed were maintained—made the qualification '*in half a minute*' unnecessary. Consequently, the navigator could refer with perfect equanimity to having sailed so many knots in a given time, for example, '*so many knots per hour*'.

It is important to recall that he spoke of sailing 'so many knots in a day' or 'per hour' and not of sailing 'at so many knots per hour'. For the sailing ship master seldom worked in speed. As

already remarked, he worked in distance run. Thus we find Captain William Hawkeridge, as early as 1625, logging in his Traverse Book his distance run as: 'To this day, noone, 20 knots S.E. and 10 knots S.W.' Usually the total of knots representing the day's run was converted during transference from the log-book to the traverse book into leagues and/or miles. But Hawkeridge, it can be supposed, if he had been asked his rate of sailing, would have replied in 'knots per hour'.

It is very dangerous to be dogmatic about the length of a knot, or the time measured by a log-glass. Originally a knot of 42 feet (7 fathoms) with a 30-second log-glass or a knot of 84 feet (14 fathoms) with a 60-second log-glass were favoured. Edmund Gunter was the first English author to point out that the mile was not 5000 feet long but more exactly 5866 feet long. This was the length Captain James took as the basis for the division of his log-line in 1631. Richard Norwood, in 1637, pointed out that the mile was more nearly 6120 feet in length, and accordingly recommended a knot, for a half-minute glass, of 51 feet (6120 feet/120). In practice, navigators found that a length of about 49 feet often gave the most accurate results, as it compensated for the effects of wake eddies and of the log's tendency to come home. Others preferred the 42-foot knot, but used a 25-second or 27-second 'half-minute' log-glass.

In the nineteenth century an increasing number of patent logs came into service—their prototypes had been developed in the eighteenth century. These patent logs became an indispensable piece of equipment as steamships increased in reliability and speed. The principles upon which these logs were based were fundamentally different from that of the old log and log-line. These logs were designed to move with the ship at an equal speed and in the same direction. The log-line, if one formed part of the instrument, once streamed, remained streamed to act as a tow line to the log which rotated faster or slower according to the ship's speed, either wholly or in part, each revolution being transmitted by the log-line to a counter dial which recorded the distance run in miles and simultaneously indicated at what rate of knots the ship was progressing. As the log was streamed continuously, the number of knots (the rate of sailing in knots) was shown continuously and not at the end of a half minute once an hour or 2 hours when the log was streamed. Thus the knots shown indicated no longer distance sailed but the ship's speed (in miles per hour). The knot from being a unit of distance, became a unit of speed.

The 1880's saw both the marketing of a variety of efficient mechanical logs, a great increase in the growth of the steamship fleets, and a considerable improvement in the reliability and thus predictability of steamship performance. Navigators worked increasingly in speed in order to predict times of arrival, etc., as well as to compute distance run. The 'knot' as a unit of speed rapidly usurped the 'knot' as a unit of distance. A school of navigators grew up disdainful of the old salts who had used old-fangled gadgets like the log and log-chip, and ignorant of the niceties of a phraseology which had become out-moded by the pace of mechanical invention. 'Knots per hour' became an archaism and now suffers the indignity of being decried as a solecism by a new generation of seamen. *Sic transit gloria.*

D. W. WATERS

METHOD OF PLANKING NELSON'S SHIPS

In his recent book, *The Anatomy of Nelson's Ships*, Mr Longridge, after remarking upon the extreme curvature that some of the planks of a ship possessed, conjectures that they must have been trimmed to this curvature. His supposition was correct and the method employed to determine their shape had enough ingenuity perhaps to give it a certain interest.

It is assumed that a convex surface is to be planked.

Two spikes (or two projecting sticks) were fastened at the ends of the surface to be planked and near its upper edge. A string was stretched between these so that it would just touch one of the intervening frames—so it would be tangent to the moulded surface of the ship at this point. A carpenter, *A*, set a bevel at 90° and placed its vertex at this point, holding the stock tangent to the curve of the frame and the tongue perpendicular to the string. A second carpenter, *B*, then placed himself so that, with one eye shut, the string appeared to coincide with the upper edge of the tongue of *A*'s bevel. *B*'s eye and the string then generated a plane normal to the curve of the frame where *A* had placed his bevel. *B* remained motionless; *A* proceeded to each frame in the

length of the string and moved the point of a pencil along its centre line until it appeared to *B* to coincide with the string. *A* made a mark on the frame and gave it an identifying number. Evidently these marks defined the intersection of the plane and the surface of the ship.

A bevel was then held with its vertex at each of these points, again with the stock tangent to the frame and the tongue normal to the string, and the tongue was opened until its upper edge touched the string. These bevels, each with proper number, were recorded on a bevel board. The difference in these bevels at any two points was the warp (wind, the carpenters said) that the plank must have in that distance to fit against the frames.

A broad but thin board (or an assemblage of such) with its inner edge roughly trimmed to fit the convexity of the ship was then placed with its upper surface in contact with the string. It was revolved about the string until the prolongation of its upper surface passed through the line of pencil marks, and it was then fastened provisionally in this position. Lines perpendicular to the string and passing through each pencil mark having been drawn on its upper surface, a compass was opened so that the separation of its legs was somewhat greater than the maximum distance from the line of pencil points to the adjacent edge of this mould; one leg was placed on each pencil point in succession and a mark made with the other on the corresponding line.

The mould was taken down, a line drawn with a batten through the line of compass pricks and the edge was cut to this line. A piece of timber having a natural curvature as nearly as possible conforming to the edge of the mould was selected, the mould was fastened temporarily to its upper surface, the lines on the upper surface of the mould were transferred to that of the timber and a line corresponding to the edge of the mould was made on the timber with a race knife. The concave surface of the timber was then hewn to this line, applying the bevels to give it the proper wind. In doing so the stock of the bevel was always held on the lines that had been transferred to the upper surface of the timber. Knowing the thickness of the plank, its convex side was obtained in the same way, and the shape of its upper and lower edges determined by 'taking spilings'.

Since the plank could always be bent and twisted an amount known by experience to the carpenters, it was not necessary that its finished shape should exactly conform to its shape in place. This permitted making it of a smaller and straighter piece of timber. In this case modifications were introduced into the process by very error-proof graphic methods.

D. L. DENNIS

SAILORS' BAPTISM

With reference to the Note on Sailors' Baptism in the August number of the *Mariner's Mirror*, p. 244, I can supply other references regarding the same custom, viz.: C. F. Walker, *Young Gentlemen, the Story of a Midshipman* (1938), p. 88 *seq.* and about other forms of treatment of young midshipmen; extracts from the *Journal of Thomas Addison*... 1801-1839 (Publ. of the Navy Records Soc., Vol. xx (1902), p. 337 *seq.*; Captain Marryat, *Frank Mildmay*, part I, chapter vii; Alfred Burton, *The Adventures of Johnny Newcome in the Navy* (1818), p. 71 (with illustrations of the Seizing in the Rigging).

HENNING HENNINGSEN

In the well-known *Travels in Various Parts of Europe, Asia and Africa, During a Series of Thirty Years and Upwards*, by John Macdonald, republished in London in 1927 as *Memoirs of an Eighteenth-Century Footman*, the following passage appears (pp. 100-1, 1927 edition):

'When we were going to cross the line, just under the sun, everyone that had not been there before was to pay half a crown towards grog for the ship's men to drink; but there were three who would not pay—a Scotchman, a Welshman and a Portuguese soldier. It is the custom to let those who refuse to pay down from the yardarm, by a rope round their middle, four or five fathoms in the sea, three times each, one after the other. It was pastime to the ship's company. Each of the three got two bottles of liquor from the gentlemen to make merry.'

On p. 102 we read that on arrival at 'Joanna'—no doubt Zanzibar—'The first thing that was done in the morning was to send the men on shore that had the scurvy, to put them into the earth

up to the neck, and to remain there one day—which is the most speedy cure in a hot country. Their skin will be as black as coal, when put in; and in two days they were as well as ever.’

The ship was the East India Company’s *Lord Camden*; she left Portsmouth on 10 April 1769 and reached Bombay in ‘the middle of September, after all the rains were over’.

J. DE C. IRELAND

It was a common custom to crown a midshipman on being rated up from Naval Cadet and the custom goes back to at least 1887—probably much further.

I doubt if there was often much ceremony about it, my own crowning was a very simple affair and consisted in the sub of the mess placing a ships biscuit on my head and breaking it with a serving mallet: but we didn’t call it baptizing.

J. R. EDGELL

MARITIME ACTIVITY IN A SOUTH CARDIGANSHIRE VILLAGE

The small coastal resort of Llangrannog is situated at the bottom of a deep glen some ten miles to the north of the Tivy Estuary. The fact that sharply rising gorse-clad hills rise sharply on the flanks of the village has meant that throughout its history there has been little contact between the inhabitants of the village and the inhabitants of the neighbouring farm localities. The villagers had no outlook but the Irish Sea, and in this environment, with the roar of the waves on the beach nearby constantly in their ears and the sight of the sea in all its moods constantly before their eyes, it is not at all surprising that the majority of the male inhabitants looked towards the sea for their livelihood.

In Elizabethan times seafaring was not an important occupation along the shores of Cardigan Bay, and the inhabitants possessed no vessels apart from small rowing boats used for off-shore herring fishing. Pastoralism seems to have been the main interest of the people, and contemporary evidence suggests the presence of a peasant-fisherman type of population. These people were engaged in off-shore herring fishing in late summer and early autumn, in addition to caring for their smallholdings. At that time no distinct maritime population existed and fishing was merely a subsidiary occupation, contributing to the economic self sufficiency of the region; herrings being a very important element in the diet of a coastal dwelling people. In the sixteenth century the requisites of the fishing industry, the nets for catching and the salt for preserving, were imported from Milford Haven or from Ireland in Irish-owned vessels, that for centuries had been engaged in trading along the West Wales seaboard. The Irish vessels landed their cargoes on the unsheltered beach of Penbryn, some two miles to the south of Llangrannog. This creek was in charge of a certain David ap Ievan ap Hoel who was significantly a yeoman farmer, which again suggests the dual nature of maritime activity at this time. The village of Llangrannog as such did not exist, although there was a small ecclesiastical settlement a quarter of a mile from the creek.

The late seventeenth century witnessed the beginning of maritime activity on the Cardigan-shire coasts. Creeks and havens from Fishguard in the south to Pwllheli in the north began to take part in maritime activity; shipbuilding became an important industry, and Welsh vessels began to take part in the trade that had hitherto been carried on by Irish or even French-owned vessels. A large number of small villages sprang up; villages whose whole economy and life was tied up with the sea and its traffic.

Although the potentialities of Llangrannog were not immediately realized, by 1750 seafaring had become firmly established in the area. The Breton type of fisherman-peasant disappeared for ever, and was replaced by specialists. Certain families that had hitherto combined farming with a modest amount of fishing, now began to concentrate on one or the other. Some abandoned their fishing activities and concentrated on the husbandry of their holdings; others left their farms and moved to the ever-growing village of Llangrannog to participate to the full in the activity that trade brought to this coastal area. Sea-faring therefore became quite distinct and localized in the mid-eighteenth century.

Throughout the early part of the nineteenth century Llangrannog flourished as a seaport, and it was only towards the end of that century when the railway reached West Wales that the decline set in.

Maritime activity in the eighteenth and nineteenth centuries was not confined to one or two members of the village community, but it was all-embracing, claiming to a greater or lesser extent the whole interest and time of the village population. The whole life of Llangrannog was orientated towards the sea, and even in the period 1880-90, when the coastal trade was on the wane, no less than 90% of the village male population was directly or indirectly dependent on the sea for a livelihood.

All Llangrannog ships were registered at the port of Aberystwyth, while the jurisdiction of all trading activities came under the port of Cardigan, whose Customs House controlled all harbours and creeks between Fishguard and Aberaeron. Until the mid-nineteenth century the Llangrannog fleet was either owned by the shipmasters themselves, or by syndicates. By 1850, however, the ownership of the fleet had passed completely into the hands of two merchant families, and all the shipmaster-owners had disappeared.

Most of the trade carried on from Llangrannog was, of course, coastwise in nature, and small vessels of between 30 and 60 tons plied their trade from Bridgewater in the south to Chester in the north. A regular service between the village and Dublin was, however, instituted in the late eighteenth century, and it is known, for example, that a number of local people were educated at Trinity College. The fare from Llangrannog to Dublin in 1836 was £6. It is interesting to note that throughout its history the contact between West Wales and Ireland has been far greater than the contacts with England. The physical configuration of Wales, with the presence of a central mountain-moorland block, has retarded easy means of travel between West Wales and England, so that it is not at all surprising that when the inhabitants of the Cardigan Bay coast began to take an interest in seafaring, that they should look towards Ireland for part of their activity.

The main cargoes imported to Llangrannog were lime for the land, culm, which is a coal dust fuel intermixed with clay, and a great variety of general merchandise. It must be remembered that the main purpose of seafaring activity was to import by sea all the commodities that the local population could not produce itself. Under conditions of self sufficiency there was little surplus for export, although periodically barrels of salted butter and salted herrings were exported to the industrial towns of South Wales.

Although maritime activity on the Cardiganshire coast is long dead, the seafaring tradition still lives on, and the allurements of the sea to the Llangrannog youth of to-day is as strong as it was to the preceding generations that sailed from their native village. No less than 35% of the male population of Llangrannog to-day are seafarers.

J. GERAINT JENKINS

THE LATEEN SAIL

I have been reading some back numbers of the *M.M.* and there has been some discussion over the lateen sail—one correspondent refers to a date of A.D. 880 for the first mention of this historically. Procopius, who was living at the end of the fifth century and in the first half of the sixth, however, refers to it, and the very ordinary way he alludes to it makes me think this sail had been centuries in use *even then*.

In his *De Bello Vandalico* 1, 13, 3, we read 'Igitur, secum inita ratione hoc agit: truis uela nauium, quibus ipse cum suo ministerio uehebatur, ab angulo superiori ad tertiam fere partem rubrica illerit'—'So at the start of the sailing of the Fleet he (Belisarius the Admiral) after careful consideration issued instructions that the three vessels carrying the principal Officers (Commodore, Vice and Rear) should have as much as one-third of the *upper angle* of their sails painted red.'

Sails having an upper angle must equally have at *least* had one lower angle, thus in A.D. 535-540 this sail was common.

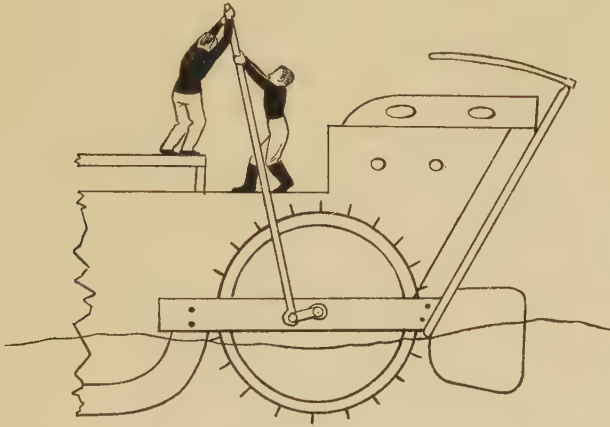
On the coast of Egypt in my younger days I saw fishing craft—particularly at Port Said—with the upper angle of the sail painted red, but it was not possible to glean from the crew what the origin of this symbol was or when it had been introduced.

G. PERCIVAL KAEYL

PADDLE-WHEEL CRAFT OF CHINA'S RIVERS

Many writers on the subject of China's river craft have mentioned types of modified junk or sampan in which rotary paddle-wheels, actuated by man-power, are employed in place of oars. There has been particular reference to a type where a single paddle-wheel, located at the stern, has been employed. In some cases, the man-power seems to have been employed in the form of a 'treadmill' or foot-gear operated by a crew of appropriate strength.

It seems, however, possible that, to avoid the complication that foot-gear would entail, a simple form of *direct-acting crank mechanism* may have been used.



In this, long, 'spar-like' connecting rods would be hitched to crank-pins secured to the axle shaft of the paddle wheel. These rods would be operated by a crew located on a platform directly above the cranks. It seems possible that such an arrangement for working paddles for 'irrigation' duties may have been employed in the remote past. The basic principle of the crank and rod is indeed an old one, as seen in that very early machine, the spinning-wheel.

It is also possible that, in more recent times, the sight of the open cranks and connecting rods of the stern-wheel river steamboats would tend to inspire the junk men to employ a similar mechanism.

By the use of 'crank-pins' capable of being altered as to distance from axle centre, a measure of gear-variation, to suit altering river and tidal conditions, could be obtained. The spar-like rods would, no doubt, be arranged to unhitch from the crank-pins for removal when not in use.

A parallel to this type of propulsion gear, for land use, however, was a common sight on our railway tracks some 50-60 years ago. Track repairing gangs used to travel from place to place (even on main lines) on trucks or trolleys operated by men working timber rods engaging crank-pins secured to the spokes of the flanged rail wheels of the trucks. Quite a good speed could be obtained by an experienced crew; people living close to the railway could usually recognize the particular sound made by these vehicles. One presumes that, in the event of a misunderstanding as to signals, the entire truck could be lifted clear of the track. The mechanism was delightfully simple—just the timber 'connecting-rods', hand operated by the (standing) crew working downwards onto the crank pins on the rail wheels.

If applied to junk propulsion, such mechanism would be equally simple. W. A. WOODWARD

NOTE ON CONTEMPORARY SAILING CRAFT IN THE EASTERN MEDITERRANEAN

On p. 46 of the 1930 facsimile edition of *Old Sea Wings, Ways and Words*, R. C. Leslie mentions the conversion in the 1880's of French three-masted cargo-carrying luggers into ketches. On p. 9 of the additional notes to this edition L. G. Carr Laughton records that at the beginning of the present century French luggers that had been converted into schooners were occasionally to be met with. He went on to say that in these vessels with the foremast so close to the stem one would have supposed that a forestay to the stem head would be useless, and that a staysail would not be set upon it. But they were rigged with such a forestay and they set a staysail on it.

Although vessels with sails are still very numerous in Greek waters, and there are even some still without auxiliary motors, observations during a journey through Greece in March 1954 suggest that now, fifty years later than in northern Europe, the same process of conversion from lug to gaff sails has been going on, at least in the mainland and western island ports.

A very common rig for small Greek cargo-carrying sailing craft used to be that of two balance lugsails, or one balance lug and one standing lug, set from pole masts of much the same height. This is the rig which, with its variations, is described and illustrated on pp. 230-3 of Sir Alan Moore's *Last Days of Mast and Sail*. In 1954 the very few vessels with lugsails seen had them only on the foremast, the type of rig illustrated in figure 218 of Sir Alan Moore's book. These were small ships and none were seen with gaff topsails. What is quite common is the small schooner with masts placed and proportioned as in figure 216 of *Last Days of Mast and Sail* with very square-cut gaff sails and no topsails. Some of these craft seemed so new that they might have been built to take the gaff rig with the masts placed and proportioned in the manner locally traditional. In some the foremast was so near the stern as to be reminiscent of Mr Carr Laughton's note mentioned above. A friend in Athens told me of a vessel he had had built since the war with a balance lug foresail. Her conversion to gaff schooner had proved a considerable economy.

One result of this process of conversion from lug to gaff sails has been that the very small schooner is common in Greek waters to-day, and there are some vessels so rigged though they are only 30 to 40 feet long. Another result has perhaps been that fidded topmasts are comparatively rare. The pole masts are tall and often topped by the ball and spearhead ornaments sometimes seen on telegraph poles in this country. Finally, of several hundred sail-carrying ships seen none was three masted. Even the largest schooners, vessels more than 100 feet long, were rigged with only two masts, with great gaffs and booms to spread their huge sails. Some of these largest schooners with their curved contours and clipper bows were very British in appearance. It may be that the design of these largest vessels has been influenced by the shapes of the many hundreds of Welsh and west of England schooners that visited Greek ports to deliver cargoes of salted cod, and at an earlier date, to collect fruit cargoes. But most of the hull forms are local and it is the hull form of a vessel that determines her type name, whatever her size and rig.

On an island in the Sea of Marmora we came across a group of small ships not more than 35 feet long, clipper bowed and with transom sterns, the hull rather narrow and deep, which were rigged with a single balance lug set from a mast in a tabernacle. Their crews spoke to one another in Greek. There were no vessels of this type among the hundreds of sailing craft at Constantinople, among which some of the types described by Sir Alan Moore are still recognizable.

BASIL GREENHILL

SEVEN YEARS UPON THE SNARES

On St Patrick's Day, 17 March, in the year 1817 Captain Coffin of the schooner *Enterprize* of Philadelphia landed at Sydney N.S.W. three men who had spent nearly seven years marooned upon The Snares. There had originally been four but one had died. The surviving three stated that Captain Keith of the schooner *Adventure of London* had landed them on The Snares in 1810 after telling them that they could either go ashore and take their chance or starve on the schooner, as there was not enough food for all the crew. They decided to risk The Snares.

According to accounts given to the press when the *Enterprize* returned to Philadelphia, the four men were set on shore with an iron pot, a quart of rice and half a bushel of potatoes. They planted the potatoes instead of eating them; when the *Enterprize* took them off, potato plants almost covered the lee side of the island on which they lived. They existed mainly on the flesh of seals and birds. They built huts of stone roofed with sealskins and brought off with them more than 1300 sealskins.

Captain George Vancouver had discovered and named The Snares on 24 November 1791, on his way to chart the north-west coast of America. In a letter to Governor Phillip of New South Wales, dated 15 October 1792, Vancouver called them 'a very dangerous cluster of barren rocks, being seven in number'. He said that they occupied 'the space of three leagues, which, from their situation, I have called The Snares; the largest, which is the N-easternmost and about a league in circumference, is in the lat. 40-03 S. and 166-20 E. longitude, bearing from S. Cape of New Zealand S. 40 minutes W., true, 19 leagues distant, and from the southernmost part of The Traps S 62 ½ W. true, 20 leagues distant; the largest, which is the highest may be seen in clear weather 8 or 9 leagues'.

The 1816 issue of *The Oriental Navigator* asserted that The Snares were 'frequented by Australian sealers'. This was not the case. The Port Jackson and Hobart Town sealers who visited almost every island, rock and reef round New Zealand and over a vast area of the southern ocean steered clear of The Snares. Even the Solanders, the twin peaks that rise steeply from the sea near the western end of Foveaux Straits, were better known and more frequented than The Snares. Even so, two men brought to Sydney in 1813 by the schooner *Perseverance* had lived for five years on the Big Solander.

Why did Captain Keith never return for the men whom he had landed on The Snares and what became of the 'hungry' schooner *Adventure*? The answer is to be found tucked away in the Annual Register for 1812. This gives the story that Samuel Telling, formerly cooper of the *Adventure*, told when examined by a magistrate in Liverpool, England, on 3 November 1812. Warrants had been issued for the arrest of Charles Frederick Palm, a Swede who had been second mate of the schooner, and of Telling. Palm could not be found, but Telling was arrested.

After landing the four men on The Snares Captain Keith had sailed the *Adventure* back to her home port of London. In 1811 he sailed again for the southern seas. This time neither he nor his vessel went any further than the coast of Africa. Otherwise he might have picked up the marooned men in 1812.

Samuel Telling stated that the schooner (called *The Adventurer* in the Liverpool records) sailed from London in September 1811. When she had been out six months the crew were on short allowance; some of them growled that they might as well be killed as starved to death. Palm, the second mate, and others began to talk of killing the captain and seizing the ship.

At 4 a.m. one day Palm was on deck trying to strike a light when Captain Keith came up and asked what he was doing. Palm replied that the captain would soon know and struck him a fatal blow on the head with a cooper's hammer. One of the crew, a Swede who had since died, took the cook's axe and struck down the second mate. Palm, this man and another Swede, who had also died, threw the bodies overboard. Palm then took command and made all those on board swear on the Bible (which had belonged to Captain Keith) that they would never reveal what had happened.

Captain Keith had taken two negroes on the *Adventure*. The two Swedish seamen went forward with a pistol in one hand and a glass of rum in the other. They gave each of the negroes a glass of rum and then shot them. One was shot dead; the other was only wounded. Both were thrown overboard. The wounded man swam to the stern and took hold of the rudder. Palm took a spade (probably a sharp-edged whaler's spade, used for cutting blubber) and swore that if the negro did not let go he would cut off his hands. The negro loosed his hold. He was seen no more.

After some consultation it was decided to scuttle the schooner and to make for the coast of Africa in the two boats. The eleven persons who survived reached the coast after three days and three nights in the boats. One boat was swamped in the surf and a ship's boy was drowned. The other ten travelled along the coast till the evening, when they lay down and slept. Next day they

met a number of negroes who took what they were carrying and stripped them of their clothes. The negroes then marched them to their village and kept them there for several days. After that the negroes took them to a Portuguese settlement at Port Lopez.

Palm, Telling and a boy named Made eventually reached Liverpool. The boy talked; his story came to the ears of the authorities and warrants were issued for the arrest of Palm and Telling. In his deposition Telling admitted that he had helped to throw the two negroes overboard. He stoutly denied that he had touched the bodies of Captain Keith or of the first mate.

THOMAS DUNBABIN

OLD NAVAL GUN-CARRIAGES 1581

Since writing my note in the August 1955 issue of *The Mariner's Mirror* I have had an opportunity of visiting the beautifully maintained and arranged Drake and Maritime Museum at Buckland Abbey, near Plymouth. Amongst the Drake relics displayed was the grant of Coat of Arms to Sir Francis Drake, 16 June 1581. The grant is framed by a beautifully illuminated border. At the top are birds and flowers, down each side are armour flags and small arms, at the bottom is depicted a lively sea fight, but in each of the lower corners is drawn a ship's cannon. The detail is excellent, the proportions are convincing. Each gun is mounted on a wooden truck carriage, having four wooden trucks, the front pair being larger than the rear pair. Accompanying each cannon are three iron round shot, a combined sponge and rammer, and a powder ladle. Rammer and ladle are mounted on wooden staves.

Drake's grant of Coat of Arms of 1581 would seem, therefore, to establish beyond dispute the type of ship gun-carriage used by the English in the 1570's and 1580's, and that the accompanying rammers and ladles had long wooden staves and not, as has been suggested, stiff rope 'shafts' to facilitate handling between decks.

D. W. WATERS

NAUTICAL RESEARCH IN SCANDINAVIA

This note is prompted by the review (*M.M.*, August 1955, p. 261) of the book *The Viking Ships*. It may be taken for granted that Dr Anderson had much more to say, regarding the book's thesis, than was consistent with the scope of a review, and that he thus left untold many things that ought better to be said; here is a modest attempt at further raising the points.

The mourned deaths of Professor Brøgger and of Professor Sketelig a few weeks ago, leave, alas, no chance for discussion with the authors, but the high respect which their memory commands in more than one sense must not deter us from airing and discussing facts.

I do not think, anyway, that this melancholy situation will much alter the outcome: I have long ascertained that, during at least comparatively recent years, the authors, even when urged by mutual friends, were not prepared to entertain discussion with foreign readers. This is just to lament that much of fine nautical research work in Scandinavia fails to receive from abroad the high tribute it deserves. This 'insularity', no doubt, should be partly ascribed to the fact that few European students can read Scandinavian languages, but there is more than that, and I am satisfied that people in France having made strenuous efforts to keep a catholic bibliography abreast of publications in our line, were often left unaware of very interesting Scandinavian pieces of work. This is said, not to be taken as a grievance, but to express the hope that some day all the valuable work I am thinking of will be readily available to the nautical research community at large and get from it the corresponding tribute. Despite its being admittedly shaped for liner deck-chair readers, *The Viking Ships* book does much to bridge the gap, and, in that sense, must be heartily welcome.

Reverting to Professor Brøgger's ideas regarding the 'from dug-out to plank-built hull' theory, I first noted that (p. 30 and *passim*) he credits Mr Ph. Humbla with the paternity of this theory in 1935. While I could not quote an authority about it, one is safe to say that the said conception of the genesis of the wooden sea-going ship was ripe and accepted everywhere a long time before 1935. I should not be surprised if it were found in some place among Jal's 2700 and odd pages, or somewhere in early numbers of *M.M.* I could not tell where I took it from, but I can testify that

I have taken it for granted for at least thirty or forty years. And I suppose many fellow-members over middle age could say as much. (See our President's *Sailing Ship*, 1925, p. 57 in 1927 edition.) The process is practically universal; plank additions to dugouts, at primitive or elaborate stages, have been seen among natives of many quarters of the globe, and at the hands of European amateurs using native dug-outs. An exception ought to be corroborated by at least some bit of evidence, and none is offered by *Viking Ships*. On the other hand, the evolutions of the bottom strake in fossil Scandinavian boats would become hard to explain if one should not see there the residue of the original dugout.

That the leather boat came before the dugout is readily acceptable, and nearly proven by the silhouette of the Stone Age glyphs. The same occurred in other places: Strabon (III, 3, 7) tells us that, at the time of Brutus' expedition, there were no other boats than leather coracles in Portugal, where dugouts came later. But succession does not mean derivation.

Some influence from the former kind of boats may have been felt. For instance, the Viking way of favouring thin supple planking, and flexibility in the whole structure, may be reminiscent of the skin-boat practice; but there is a far cry between such general influences and a progressive evolution of technics, leading from some kind of umiak to the Als boat, a process about which the book fails to offer even surmises.

Professor Brøgger sees a proof of the derivation of the plank-built boat from the umiak type in the fact that both have ribs, while the dugout has none. One can but fail to agree: the log canoe, at the intermediate stage, with raised sides, unavoidably has connecting pieces which are not more essentially different from frames than the skin-boat's ribs. One will admit that dugouts could hardly have accommodated whole families with cattle and impedimenta moving for resettlement, while skin-boats could. But that may be a proof of co-existence, and does in no way imply some derivations of one type into the other one. The same may be said as regards the transport of heavy pieces, although, before forming an opinion in that case, one would like to know more than the old chronicles tell us regarding, for instance, the Iona log boat contraptions of St Columba's time.

In short, it would require more than surmises to deny to ancient Norway the use of the dugout enlargement process which is found practically everywhere. And a pretty old one: The *Periplus of the Erythrean Sea* of c. A.D. 100 (edited by C. Muller, *Geographi Graeci Minores*, Paris 1882), mentions (p. 270), in an island of Eastern Africa (? Zanzibar), *ploiaria rhapsa kai monoxyla, naviculae consutae et uniligneae*, which plainly means log boats with sewn additions.

As regards Professor Brøgger's assertions (p. 30) that a dugout 'could not live in the sea', the opinions may have been entertained by the skald he quotes, who spoke at a time when ships like the splendid Gokstad, and larger ones of the same kind, were in use, and one had long forgotten the monoxyle outside inland or calm waters; but we could hardly be entitled to sharing it after the *Tilicum* has put on record what can be achieved by a dugout with jury additions.

L. G. LA ROËRIE

THE ISLES OF SCILLY GIGS

Not all the gigs that were taken to the Isles of Scilly were new, they had often been in use before at Falmouth and St Mawes, and were often used for sampling a cargo. There are still several gigs in the Isles, but more are of the larger type, built about 70 or 80 years ago for potato and flower carrying.

There have been at various times in the Islands some 30 six-oared gigs. In general, these died through neglect with the passing of the sailing ships. The few that remained were scarcely used except on regatta day when they raced, being both rowed and sailed. All the gigs were fitted to sail with a dipping forelug and a standing lug mizen.

On one occasion a great rowing race took place, there being no fewer than ten gigs taking part. It appears that in nearly all the rowing races a triangular course, similar to that used at Newquay, was traditional and was rowed anticlockwise, so that on reaching each mark the bow oar could be tossed to starboard to aid a speedy turn. There is still in the Isles the racing trophy, a silver bowl with George III florins embedded in it.

Some 70 years ago there was an argument in the Islands as to which was the faster gig, the 30-foot *Shah* or the 31-foot *Czar* from Bryher. A race for just these two was arranged, and they had to pull over a triangular course of more than usual length. They raced side by side until on turning the last mark the *Shah* gained one length and held it to the finish of the race.

The *Czar* is still at Bryher, so is the *Sussex*, a large type of gig with more beam. St Agnes still has *Gipsy*, *Campernell* and *Klondyke*, the last two being the bigger type. *Zelda* and *Gleaner* are still at Tresco, *Queen* at St Martin's and *Emperor* with a motor installed at St Mary's.

The titles of rulers seem to be a favourite method of naming these gigs, as one of the *Shah's* former rivals was the *Cetewayo*, which was used for firewood within living memory. This gig was purchased from St Ives.

Writing of names, I shall always be of the opinion that the Newquay gig *Dove* was named after she had been out in a heavy sea. We old rowers know that in rough weather she is a 'dirty' boat and *Brewer's Dictionary* says 'Dove—the diver bird; so-called from its habit of ducking its head'.

Perhaps the reason for this is to be found in the fact that on taking a piece of the *Dove's* planking to Mr Peters he was amazed to find that broad leaf elm had been used to build her and not the usual narrow leaf kind, which is much more flexible and lighter.

Newquay Race

In 1924 I was rowing bow oar in the *Dove*. I was 14 at the time. We rounded the Eastern mark in Newquay Bay just astern of the gig *Newquay*; we were overtaking in a heavy sea and our coxswain made the mistake of trying to pass on the inside. At our first attempt the keel of the *Dove* slid across the gunwale of the *Newquay* and I was able to look down into her; at the second attempt the stern of the *Newquay* was towering high above the bow of the *Dove*, and when she came down off this sea I was able to watch the stem of the *Dove* smash several planks in the *Newquay's* quarter. Fortunately, the hole was above the water-line, and the *Newquay* went on to win the race.

The gigs are wonderful sea-boats, and often made trips from the Isles of Scilly to France. The *Hope* was the last of the Isles of Scilly gigs to go to France for a smuggled cargo, but I gather she was sailed most of the way. The *Hope* was built in the Isles of Scilly by a boat-builder named Samuel Tiddy, who also built the *Sultan*, the *Leo* and the *Gipsy*. Tiddy had served his time in the Peter's Yard at St Mawes and returned to St Mawes again when he retired.

During the past three years the Newquay Rowing Club's fleet of six pilot gigs has become an object of great interest in Cornwall, and many thousands of visitors to Newquay go home with memories of these ancient craft in which men once fought for their livelihood with bare hands against the might of the Atlantic Ocean.

One of the chief reasons for this success is the painting of these boats in distinctive gay colours. When these boats left the builder's yard at St Mawes old Nicholas Peters, and also his father William, insisted that they should be painted white no matter what colour was ordered; the only other finish allowed by them was varnish. As an aside, Nicholas Peters often delivered the new gig and collected payment for same, he was a man who often imbibed too freely and on some occasions little of the proceeds reached St Mawes.

Three years ago one of the Newquay gigs, the *Dove*, was burnt off and to the amazement of every one it was found that beneath a century of black paint was a scribed waterline and her original paint in two light colours. This we considered evidence enough for a break with tradition and the other two, *Newquay* and *Treffry*, were burnt off also. The same state of affairs was found; once, beyond living memory, they had been two-coloured and not black.

When *Slippen*, *Bonnet* and *Golden Eagle* left Scilly, some of the islanders, though not exactly disapproving, were rather sorry to see them go. I can assure them that if only they could see them now, they would not regret their departure. On the quay at Penzance, one old lady expressed her views very loudly, but it was pointed out to her that if something was not done to them they would die of neglect. Now they are good for many years to come.

On their arrival at Newquay, members of the Rowing Club set to work on them, the first job being to burn the paint off all of them on the outside as quickly as possible, so that they could be temporarily repaired for one season.

The first to be tackled was the *Golden Eagle*, because she looked to be in reasonably good trim. She was refastened in a few places and painted bright orange, with white below the water-line, and looked fit to use. However, on being tried out, no treatment we could give her would prevent her leaking very seriously, so a further examination was made. In was eventually discovered that every nail in her would have to be replaced, the centre of each one having withered to about the thickness of an ordinary pin. Was she used to salvage a cargo of an acid nature, such as vinegar, or did she carry a lot of chemical artificial manure? We had to admit defeat with the repair of the *Golden Eagle* and put her aside for the season.

Now to tackle the *Bonnet*. Having been burnt off, she was painted bright green with white below the waterline. She had been retimbered in Scilly, but the timbers had been spaced too far and nothing would prevent her leaking, she being far too limp. The season was now well under way and it was decided to cease action upon them until the winter. Then all three were burnt-off inside.

In October 1953 they were all taken to the boatyard of Mr Brabyn of Padstow and he, with his assistant Donald MacBirnie just back from Korea, set about them.

The *Bonnet* was fitted with thirty-two new timbers, and each one was taken right up to the gunwale. She, as were the other two, were fitted with new internal bottom boards and sheets. The boards being fitted by a new method to prevent fracture of the timbers.

The *Golden Eagle* was damaged in an accident while waiting to be taken to Padstow due to the extraordinary high spring tides, combined with heavy seas. Her keel, deadwood and garboard planks were all broken at the stern. The use of iron bolts had made her somewhat rotten in this part. A section of about 5 feet of keel, to a builder's scarf, was renewed together with the deadwood and the garboard planks on both sides. She had had every rivet in her hull replaced and twenty-two timbers were renewed.

The *Slippen* looked a sorry sight when she was burnt off and taken to the boatyard. The stern end of her keel just about fell off when the keel band became detached, as she was lifted on to a 26-foot long trailer for transport. This gig was in such poor trim that we had to give some consideration as to whether the cost of repair was worth while. The shipwright had quoted between £50 and £60. However, we decided that a boat with such a history could not be easily laid aside, and with a few of us guaranteeing the money in case we could not raise it, the decision was given to Mr Brabyn to carry on.

The *Slippen* required twenty-three long timbers right up to the gunwale and sixteen shorter ones. She has a new breasthook, and her stem has been streamlined to make her appearance match the other gigs. Some of her bilge planking has been renewed, together with the bilge keels. Two thwarts were replaced and several knees and rowlocks renewed. Several feet of the stern end of her keel has been replaced, together with the garboard planks, deadwood and sternpost. A new rudder and yoke have been made. The old deadwood and a piece of planking was returned to Mr Jack Hicks at St Agnes, a pilot who had worked in her. We feel that *Slippen* was just about snatched from the grave.

All the gigs have been fitted with a hardwood false keel, instead of an iron keel band—we find this wears much better. In the case of the *Slippen* this false keel was made slightly thicker than usual to give added strength and was riveted right up through the timbers. She is painted yellow with pale blue below the waterline, and a thin band of pale blue on the rubbing-strake.

On trial all three gigs did not leak even the smallest amount, and when, in the first race at Padstow, *Slippen* won, being rowed by a crew from Falmouth, we all felt our efforts had been rewarded. This was in April 1954, and was the first time since 1857 that six gigs had taken part in a race off the North Cornwall coast, and three of the same gigs were competing.

On Sunday, 11 April 1954 the Newquay's Rowing Club's fleet of six gigs was rowed the 16 miles from Padstow to Newquay after their first major refit in 100 years. The time taken by the first to arrive at Newquay was 2 hours and 40 minutes.

This was an epic sight, six long, slight craft, painted in gay colours, literally gliding their way home in a smooth sea, with oars flashing in brilliant sunshine and watched by groups of people on every headland along these miles of grand Atlantic coastline; a sight unlikely to be seen again for many a long day.

The *Newquay*, *Bonnet* and *Golden Eagle* are all 30 feet long. The *Slippen* is 28 feet long, the *Dove* being 31 feet and the *Treffry* 32 feet. All are about 5 feet beam, they are low in the waist and the transoms are only 12 to 15 inches wide.

Despite their great age, all the gigs suffered from a builder's fault, iron bolts were used to fasten the deadwoods.

This small saving of copper has cost the Newquay Rowing Club many pounds during the past year. The final rusting of these bolts with consequent decay has involved the replacement of the stern end deadwoods in three of the gigs, which means replacing the stern post and about eight feet of keel, together with the garboards.

Races are nearly always over a triangular course, the big events on Regatta Day and the Silver Gig Race being decided over about six miles.

The Silver Gig Race is the most important race of the year. The trophy then rowed for is a solid silver scale model of a pilot gig, presented by the late T. A. Reed, Esq., in 1922, and it is every member's ambition to get his name engraved on it. This trophy is now valued at £200.

On the straights the Coxswains urge on their crews with cries of 'Azook'. No one knows where the word comes from, but we all know that it means 'pull harder'.

H. O. HILL

LANCASTER OF THE EAST INDIES 1592 AND 1600

Drake, Hawkins, Frobisher, Lancaster, those gallant and reckless privateers in the service of Elizabeth I of England who, under the command of Lord Howard of Effingham, Admiral-in-Chief of the Queen's ships, routed and destroyed the 'invincible' Armada, and while Cadiz had yet to fall, sacked and captured Spanish galleons up and down the seven seas, bringing priceless treasure to enrich the throne at Whitehall, leaving enemy bastions vulnerable and their coffers bare.

The deeds, both famous and infamous, of Drake and the fearless Hawkins are well enough known to all students of history, while the Frobisher Straits to the South of Baffin Land honour for all time the pioneer of the North-West Passage to India. Yet also near Baffin is the Lancaster Sound, named after Captain Sir James Lancaster, a man singularly ill-chronicled, yet whose impact on sea history has kept the waters eddying to this day. For he not only went on the first Imperial Mission to Java and Malaya, but he introduced the juice of fresh limes as a preventative—and cure—for scurvy, the most deadly of all enemies to sailors under the square rig.

Lancaster was born in Basingstoke, when its streets were narrow and cobbled and the houses tall and timbered; yet it was a progressive town, even in those days. His birth and childhood remain obscure, though it seems certain he was of noble family and possibly related to the first earl of that name. In his youth Lancaster served as a soldier and later took to the sea, though not before he had spent several years in Portugal, where he lived among the people there as a merchant and gentleman. When the war with Spain was rumoured he returned again to England only to speak bitterly of the Portuguese as 'men without faith and without truth'.

Since Lancaster did not marry, it may well have been that he was denied the love of some fair señorita, or perhaps it was only that he failed to bring about a desirable business coup. But whatever the reason for his personal antipathy for the men of Portugal, he lacked no interest in their spice ports of the East Indies. In fact it can safely be said that he was obsessed by them and the wondrous things they had to offer. For James Lancaster had listened well to tales told in the taverns and counting-houses of Lisbon and with his own eyes had seen galleons returning from the Orient low in the water with burthen.

And so it came to pass in June 1592, four years after the defeat of the Spanish Armada, in his 300-ton ship, the *Edward Bonadventure*, which had served him so valiantly in the great battle, James Lancaster dropped anchor close-in against the enchanted island now known as Penang, which lies to the north-west of the Malay Peninsula (often termed the Golden Chersonese), where the State of Kedah meets the frontiers of Siam. Here, once the kindly Malays living in scattered *kampongs* (villages) on the island and nearby mainland learned that the white captain, in doublet and hose, had come in peace, Lancaster got the help he sorely needed for his suffering crew.

Indeed, Pulau Pinang, as Penang was then named, became not only a field hospital of beauty and tranquility, but it played an important part in medical history.

For James Lancaster had no mission in the north of the Golden Chersonese, where apparent gains or cargoes there were none and ports had yet to be established. And where, it is believed, but one other Englishman had set foot and he that intrepid traveller, Ralph Fitch, whose voyages had been before hostilities with Spain. It is recorded that Fitch studied the Portuguese methods of trade in Malacca (then Malaka), on the south-west coast of Malaya, and in the Moluccas. Nutmegs, mace, pepper, camphor, gold and silk, quicksilver, porcelain, opium and the Orient's staff of life, rice—such was the rich entrepôt trade established by Alfonso d'Albuquerque in 1511 and retained by his countrymen until the Dutch stormed and captured Malacca in 1641. The Dutch reason, alas, for this bloodshed was to kill the prosperous trade of the Malay spice port because it interfered with that of their own in Java, and thus Malacca became a bastion from which any adventurous traders could be watched and frustrated.

In the light of what happened later, it is almost certain that when James Lancaster, together with a 'goodly company' of privateers, sailed from Plymouth on a windy April morning in 1591, his destination was unquestionably Malacca. Not to capture it, though it is certain that Lancaster would have liked to have done this, but more to spy out the landfall and fortifications and to see what manner of ships the Portuguese had based on their treasure house. But ill winds attended the *Edward Bonadventure* after leaving the shores of England and together with the *Penelope*, commanded by Captain George Raymond, and the *Merchant Royal*, under Captain Samuel Foxcroft, Lancaster did not reach Table Bay until mid-August. And after so many weeks in the doldrums, during which many men had been buried at sea, scurvy was rampant in all three vessels.

The sick were returned to England in the *Merchant Royal*, and with two capital ships and 198 men in all, Lancaster sailed again in September, only to be overtaken by a tremendous storm off Cape Corrientes in which the *Penelope* went down with all hands. In a second hurricane, which followed quickly in the wake of the first, the *Edward Bonadventure* took terrific punishment, losing several men overboard and with many more injured. To add to this disaster there was an affray with natives when the ship put into the Comoro Islands for supplies. This cost another thirty precious lives and the long boat.

Even after resting and refitting in Zanzibar, ill luck still beset the pitiful remains of the once great expedition, and ere Lancaster reached Pulau Pinang several months later, many more souls had passed on and there was again deadly scurvy aboard. But in Malaya, where tropical fruit grew in abundance, the distracted Captain was taught the beneficial uses of this form of food and its content of what we to-day call 'vitamin C'. The juice of wild limes did such prodigious good for his dying remnants of a crew that every nook and cranny of the *Edward Bonadventure* held barrels of them packed in sand when Lancaster sailed. And together with fresh meat he was able to barter for, and the game hunted, he left Pinang again in September only thirty-three men strong, but each one now sound in wind and limb. He had also made friends among the Malays, learned a useful smattering of their language and conferred with the Sultan of Kedah, who lived beyond the great wooden fort at the mouth of the river on the mainland. The Sultan, it seems, had been mightily intrigued by stories of the *English Queen*.

And in the sultry courts of this king, pungent with the smell of burning wood ash—and intrigue—where maidens were hidden from view by grass screens and princes of the Royal blood wore sarongs stiffened with gold and regalia studded with jewels, Lancaster learned much of this lovely land. A soft, enervating, voluptuous land, almost submerged in impenetrable jungle which abounded in wild life—tigers, panthers, elephant, buffalo, rhinoceros. A green and fertile land of plentiful rain, of blue velvet nights and crystal-clear mornings, wondrous sunsets and a friendly sea—a warm land. Silver sand and palm trees edged the coast like fine lace, and rice was harvested twice in one year. The frail bamboo houses of village and foreshore were raised high upon stilts, away above danger of spring tide, and much contentment filled the simple people who were dusky of skin. For the Malay, in those days, lived not gainfully.

In the evenings, mellowed by the goodness of the curry pot, the old men talked freely, telling the white sailor that this country was the true kingdom of the mighty Solomon and the mist-

capped Mount Ophir, near subjected Malaka, still held his fabulous horde of jewels and gold (both gold and diamonds have subsequently been found near the foot of Mount Ophir). And the coming of Albuquerque, in shining helmet and breastplate, toiling through the sun with his infidel hordes, his storming of Malaka and the failure of the Malays to retake their own land. Of the Arab *dhow*s which brought rich merchants from Persia who stayed to spread the creed of Islam in Malaya, and the Chinese, who also came to trade, but settled here and there to draw upon the country's hidden wealth. There were tales of Tamâsak (Singapore), too, and pirates, and the priest from the West, Francis Xavier, called saint by his followers, and that fine Venetian gentleman (Marco Polo) who came in friendship long years before.

So it was that James Lancaster had much to think about as he set sail again for England, now having neither the vessels or men to complete the original purpose of his voyage. But he had learned much, much which would be news to his friend Drake, for although Drake was said to have circumvented the globe itself he had not made port in Malaya. Still the prey of strumpetty winds, Lancaster dreamed of fleets of ships, plying between England and the East Indies, taking the knowledge of the Queen's master minds to India and Malaya and returning laden with the treasures of the Orient. And while cruising along the Martaban coast he sighted and captured a Portuguese merchantman laden with pepper, another of 250 tons burthen, and a third, rich in cargo, with a crew and captives numbering three hundred. And great were the rejoicings on the *Edward Bonadventure*.

For though unsuccessful in its real purpose had been the expedition and the loss of life terrible—barely twenty of the original 198 men doubling the Cape of Good Hope—it had ended with the discovery of lime juice and as neat and rewarding a buccaneering job as ever delighted the roguish heart of an Elizabethan privateer. The way to the East Indies was now open to England and although the lime-juice cure for scurvy was not generally adopted by the fleet and merchantmen until nearly 200 years later, the discoverer himself never again sailed without limes or lemons.

Returned to London, Lancaster must surely have had audience with Her Majesty at the Palace of Whitehall, but received no promise from her for the fulfilment of his dream of trade with the East Indies. 'Ships, indeed, my good Lancaster! Do you forget that England fights a bloody war with Spain? We do not have time for idle flights of fancy, of Eastern courts and heathen kings. England needs money for fighting ships.' Thus reprimanded Lancaster was put in command of three cruisers and spent several years fighting along the Spanish coast and having a real battle royal in Pernambuco (Brazil). The result of such duties was richly rewarding, filling the holds of his ships with gold and other precious cargo. And ere he returned to Plymouth in 1596 Lord Howard of Effingham had breached the walls of Cadiz and England lay at peace.

In the year 1600, by Royal Command, the East India Company was formed, part of the wealth of Lancaster's voyages being used as the first capital, and as a director of the young Company, Lancaster sailed again for sunny Pulau Pinang. This time he was invested by a 'Commission of Martial Law' and carried with him letters from the Queen to the Eastern kings. For the second expedition he had four ships, the *Red Dragon* (in which he sailed), the *Hector*, *Ascension* and *Susan*. Before going to Malaya, however, the squadron entered the small port of Acheen, in Java, where he received a warm welcome from the King who had heard of the English Queen and her victories over the Spaniards.

And it was the King of Acheen who aided and abetted Lancaster in his reconnaissance voyage to the Straits of Malacca, where the Admiral observed the coveted spice port to be an impregnable fortress, at least as far as England, still bleeding from a long and bitter war, was concerned. And, as already stated, it was from the Dutch and not the Portuguese that the prize was eventually wrested. But homeward bound Lancaster captured a Portuguese galleon near the Moluccas and established an emporium in the islands where a free and lucrative trade for Britain was inaugurated. And though the beloved Pulau Pinang was not opened up by the English until 1771 when Frances Light, of the East India Company, started his trading post there, vigorous intercourse with India was maintained from Lancaster's time.

On his return to London after the second expedition to the Orient James Lancaster was knighted by the ageing Queen Elizabeth, whereupon he settled down to the administrative side

of the East India Company in the City, being no longer of an age when he could put to sea. He died in 1618, a rich man, and is buried in Allhallows Churchyard, London Wall, having survived his sovereign by fifteen years.

DOROTHY THATCHER

QUERIES

4. (1956). BOUNCING CANNON BALLS. In the current film 'The Dam-Busters', there is an apparently quite serious suggestion that Nelson was the first to make use of the fact that a spherical object projected at sufficient speed from a height will 'bounce' on the surface of water in a uniform manner, and that he was in the habit of pitching his cannon balls about two-thirds of the distance between him and the enemy. I can discover no other reference to this practice in any work on naval gunnery, and wonder whether any of your other readers might be able to make some comments.

R. C. SAXBY

5. (1956). 'ROYAL NAVY, RETIRED.' I have friends among naval officers, and I sometimes wonder whether I am addressing those who are on the retired list in the correct manner. The proper etiquette of forms of address may be found in such publications as Chambers's *Twentieth Century Dictionary* and *Pears Cyclopaedia*, yet nothing is told on the subject about naval officers. It appears that admirals are never addressed as 'Royal Navy', as that is taken for granted since there are no English admirals who are not in the Royal Navy; and, similarly, I believe it is usual to omit the word 'retired' when addressing a flag-officer on the retired list. Certainly one never sees such a style as 'Admiral-of-the-Fleet Sir Hercules Jones, *Retired*'. The question is, what is correct for other ranks? I have been reading the late Captain E. Altham's book, *Fellicoe*, in which, at chapter XI, occurs the following: 'It is entirely incorrect to allude to a retired naval officer as an "ex-naval officer"; the appellation "Retd." after his name is as redundant as "Act." would be after that of an officer on the Active List; and to omit the R.N. in the case of officers below Flag rank is distinctly discourteous.' A footnote adds: 'The Admiralty, in their official communications, do not differentiate between officers on the Active and Retired Lists in their mode of address.' I think this must be true, because I have been shown an officer's voucher for retired pay in the form: 'I (name), of (address), a (rank) in the Royal Navy...' This seems to confirm the idea that 'once a naval officer, always a naval officer'. It would be interesting to learn the opinions of naval readers of the *Journal*.

E. WADE-KILLICK

6. (1956.) JOHN HENDERSON. Can you suggest where I should look for information about John Henderson, shipbuilder of Poole, in the second half of the eighteenth century?

E. M. P. EVANS

7. (1956.) JET PROPULSION. Among the methods of marine propulsion which were the subject of patent application towards the end of the last century was one in the name of a Mr Hazeldene, or a similar name.

In this the ship was to be fitted with a sort of 'hollow' rudder in which gas (generated one presumes from oil) was exploded, driving out the water standing within the rudder, and thus producing a sort of 'jet propulsion'.

Can any of your readers supply any information regarding this particular patent, and say if any serious trials were made?

W. ADAM WOODWARD

8. (1956.) UNANSWERED QUERIES. During the past forty-one years, the circulation and number of readers of *The Mariner's Mirror* must have increased enormously, but the new subscribers may not have access to earlier volumes so many queries of the early days remain unanswered or only partially so. Would it be possible to compile a list of those unanswered queries and invite present readers to submit explanations or theories? I think this would precipitate a flood of interesting answers.

EDGAR K. THOMPSON

Captain Thompson's suggestion is a good one. When Dr Anderson's Index is available I will do my best to provide such a list.

EDITOR

9. (1956.) EARLY AEGEAN CRAFT. I have sought in vain for information on early Aegean sailing craft at a time when the Greeks were operating an extensive commerce between Anatolia and the European ports—say 2000 years ago.

The late Mr Laird Clowes has assimilated much knowledge of the larger Roman corn vessels of this period, but classical writers are silent about their contemporary craft in the Aegean.

From St Paul's description we know that some of these vessels were relatively small, and yet capable of making at least 60 miles in the day either under sail or possibly helped by oars.

The Aegean sailing craft of this century make fascinating study, though apart from my photographs during the First World War, and the more recent models at the Royal Hellenic Yacht Club, I have seen no better record of these decorative craft which have already cut down their sailing rig on account of the more efficient motor propulsion.

It would be interesting to know whether these craft have inherited any of the characteristics of their early predecessors, and whether from early seals, mosaics, or drawings any information can be obtained.

H. M. DENHAM

ANSWERS

3. (1929.) CUTTER-BRIG. *Webster's Dictionary*, 1911 ed., gives another American definition of this as 'a vessel rigged like a yawl but having square topsails on the mainmast, now rare'. It would thus differ from a square-topsail ketch only in having its second mast smaller and farther aft. Although its name must be much later, the rig is one shown by Van de Velde the younger in a Dutch vessel, which is rigged like a seventeenth-century yacht, but has a lugsail set right aft—possibly a boat's sail set on the ensign-staff. This suggests that the cutter-brig may have had Dutch ancestry. The lack of pictures of it makes it seem to have been rare at all times.

R. MORTON NANCE

18. (1955.) SACK SHIP. *Seco* (Spanish), *sec* (French), anglicized *sack*, applied to light dry ports and sherries which were often shipped by the Newfoundland codfish brigs and schooners in Peninsular ports for the return voyage to Newfoundland and later reshipped to England. The port, known as Newfoundland port, was a popular drink in the captains' and wardrooms' messes of the R.N., being unaffected by any further shaking up it certainly would receive where heavy or vintage wines would become undrinkable.

CLAUDE CUMBERLEGE

25. (1955.) SPLICE THE MAIN BRACE. This rare and refreshing command, when issued by the Sovereign and applied to rum, has its origin in the fact that if a main brace parted, it was never spliced but removed and replaced by a new one; action being taken temporarily to steady the main yard by appropriate handling of the sails on the main and with the preventer braces.

CLAUDE CUMBERLEGE

36. (1955.) BELLY AND FOOT. If this term is English and not a corruption of a local name, it might refer to some sort of basket in which dry commodities like rhubarb root and benzoin could be packed, the sides of a basket are its 'belly' and its bottom the 'foot'.

R. MORTON NANCE

45. (1955.) SHIP *Lintin*. I have a volume of Lloyd's *Register* for 1856 which mentions this vessel. She was built at Sunderland in 1834, as stated by Mr Hornsby, but her home port was Sunderland, not Liverpool; the owner is given as J. Smith. She was of 558 tons and was classed *Æ 1 in red, indicating that she had 'passed the period assigned on the original survey, or Continuation, or Restoration', and was 'found on survey of superior description, fit for the conveyance of dry and perishable goods, *to and from all parts of the world*'. (The italics are in the original.) My copy of the *Register Book* has been 'posted' with subsequent annotations indicating

various repairs, etc., as well as a 'restoration' in 1845 and a special survey in 1856. The column headed 'Destined Voyage' originally contained 'Liv' (Liverpool), but this has been deleted and 'Hpl' (Hartlepool) substituted. As she was classed, no doubt Lloyd's Register will have some note of her further history and probably of her end.

J. FOSTER PETREE

REVIEWS

THE WHALING JOURNAL OF CAPTAIN W. B. RHODES 1836-1838: IN THE BARQUE *Australian* OF SYDNEY. Introduction and Notes by C. R. Straubel. Christchurch, New Zealand. Whitcombe and Tombs, Ltd. 1954. $9 \times 5\frac{3}{4}$ inches; 123 pages. Price 18s. 6d.

This is a printed version of the log of an early whaling-captain, on a voyage after right whales and sperm off the coast of New Zealand and in the waters of the south-west Pacific—in what were formerly known as 'Australasian waters'. The captain's Journal is tantalizingly brief and breaks off before the completion of the voyage, but it gives a good insight into the difficulties of the old-time whaling from small sailing-ships. It is obvious, however, that the captain had no previous experience of whaling and engaged in the voyage as a venture. His reports of crew troubles, laconic as they are, tell more than he knew. Such an excessive amount of crew trouble was surely unusual, and so, too, was the habit of picking up so many thoroughly dead whales, some of which, presumably, had been killed by other whalers. It is obvious that the crew had no high opinion of their captain. We are given no full description of the *Australian* herself, though we learn that she was a barque of 265 tons, built on the Hawkesbury River. The introduction by C. R. Straubel is the best part of the book and, long as it is, I wish it had been much longer. I would like to see some of the old logbooks in the possession of Dr Crowther, of Hobart, worked up into an account of the S.W. Pacific whaling. Captain Rhodes knew too little of his subject for my liking.

ALAN VILLIERS

CHEPSTOW SHIPS. By GRAHAM E. FARR. The Chepstow Society and the Newport and Monmouthshire Branch of the Historical Association, Chepstow, 1954. $10 \times 6\frac{1}{4}$ inches; 215 pages. 42s.

In a review some years ago in this *Journal* the present writer deplored the lack of attention to the maritime side by those who write local history. Since then a number of books and papers have been published which have begun to fill this gap. In its way the book under review is a substantial contribution. The greater part of it comprises of transcription of the local ship registers of Chepstow. The transcription is preceded by an introduction of wide interest and followed by six Appendices. The book is very fully indexed. Many of the transcribed entries of individual vessels have supplementary notes by the author. The whole is an admirable piece of local historical research.

BASIL GREENHILL

ORWELL ESTUARY. By W. G. ARNOTT. Published by Norman Adlard and Co. Ltd. Ipswich. $8\frac{3}{4} \times 5\frac{1}{2}$ inches; 125 pages. 12s. 6d.

To many people, especially those getting on in years the name Ipswich probably conjures up thoughts of Mr Padwick and the Great White Horse Inn, while to those who do not read Dickens the name quite likely brings back pleasant memories of journeys to Norfolk and the Broads. At any rate, it may be assumed fairly safely that few connect Ipswich with the sea and ships. Yet Ipswich is quite an important port, and the book under review gives the reader a good idea of how this city has become a port and even ousted to some extent its one time rival Harwich which, though much nearer the sea, is now almost entirely confined to the packet service. Of course, any history

of either of these places, Ipswich and Harwich, is very much bound up with that of the Orwell as it is through that river that Ipswich becomes a port and it is from the mouth of that same river that ships have sailed from Harwich down the centuries. At one time the Orwell had on its banks a number of shipbuilding yards and a number of King's ships have been built in that district, but that is now all over, and apart from one or two yacht yards the shipbuilding trade is dead. Fishing is another industry that at one time flourished both at Harwich and at Ipswich, but as the shipbuilding died out so has the fishing. In fact, the whole tone of this book is slightly tinged with melancholy, most of the places mentioned have seen better and busier days, even Harwich has nothing except its packet service and that brings people to the place only for them to leave it straight away. Ipswich is the only exception to this feeling that the old days were better days, as far as material things went anyhow, and Ipswich is going ahead both as an industrial town and a seaport, its latest quays can take any ship big enough to enter the harbour at Harwich, yet at the same time the author claims for Ipswich a country atmosphere, a pleasant town indeed from all accounts. In addition to descriptions of the villages, towns and scenery generally around the Orwell, there are interesting details of local customs, etc., which help to show what the district was like and what it is to-day. There are some very interesting old photographs to illustrate the text and some good old maps and charts, but it would have helped the reader a lot to have included a modern map or chart, even if only as an end paper. There is an interesting appendix giving a number of the ships built on the Orwell, also a useful bibliography, and the book concludes with a good index. A nicely produced volume and well printed on quite good paper and, for these days, at a very reasonable price.

H. O. HILL

CARL ROOS: *Prisonen. Danske og norske krigsfanger i England 1807-1814* (Copenhagen, 1953). 232 pages; 78 illustrations. 27.50 Danish kroner.

During the years 1807-14 Denmark was at war with Great Britain. The sympathy of the Danes was originally on the side of the English with whom they had many common interests. The conquest of Copenhagen in 1807 and the abduction of the Danish 'Grand Fleet' was a tragical misunderstanding; it forced the Danes to join Napoleon against England. The consequences were terrible for Denmark: Norway was lost, the state made a bankrupt in 1813, and great poverty prevailed for the next half century. Furthermore, about 1400 Danish and Norwegian commerce-ships were taken by the English. It is strange that no historian until now has written the story of the approximately 7000 Danish and Norwegian sailors who were forced to spend years of bitterness in British prison-camps and on board prison-hulks in Chatham and Plymouth. Professor Roos, in his book, gives an account of the life and the conditions of these Danish war-prisoners. He has found several contemporary journals and records, objects and pictures and has put the numerous small pieces together and has produced a fascinating mosaic. He tells us with a minuteness of detail about the prisoners' fate in the overcrowded prison-ships, where the food was bad and insufficient, the clothes thin and worn, the sanitary circumstances incredible, and the treatment from the guards hard and unjust, in short, life was almost intolerable. At the beginning the prisoners were like wild animals; they stole food and clothes from their comrades, they fought and murdered, swindled and played with false cards and so on. But little by little the human spirit triumphed over the chaos, and a regulated human society came into being. The prisoners cared for justice themselves and punished the thieves and traitors among their comrades. They were allowed to work in bone, wood, hair and straw; they made ship-models, shrines, boxes, spoons, armchairs, etc., which were sold to the English public. They held sports competitions, produced plays, arranged festivals and balls. The young ones (there were several boys of 10-12 years of age among the prisoners) were taught religion, navigation, mathematics and other subjects by the older sailors in their voluntary schools.

About 10% of the prisoners had been captured *before* the war broke out. Many of them came from East and West India and knew nothing about the war in Europe. Those men were not

considered real war-prisoners and therefore had no hope of being released, but, by an irony of fate, had to stay for 7 years in prison before the peace at last was made. Some Englishmen pitied the war-prisoners and tried to make their life easier by gifts of money and useful objects.

The author treats the subject from a human and psychological point of view which makes the reading rather thrilling. In one chapter he examines the feelings of the Danish nation, especially of the prisoners, against their enemies, the English. In spite of the misery caused by the unjust war, in spite of the bad treatment and the unscrupulous attempts to force them to enter the English service, many of them admitted that not the whole British people was at fault—and we must not forget that the hate of the Danes against the Englishmen at that time was just as strong as against the Germans during the occupation of the last war.

The documents of the Danish State Archives have been used by the author, but in English record-offices there must be other documents to supplement the Danish ones. Certainly it would be an interesting task for an English historian to examine those papers and compare them with Danish accounts.

The book has a series of interesting illustrations, most of them unknown to British readers. Historians of a victorious nation often overlook the records of the conquered enemy. Probably English scientists will learn a good deal of interesting facts when they read Professor Roos's contribution to the existing literature on the Napoleonic wars.

HENNING HENNINGSEN

SEVENTEENTH-CENTURY RIGGING. A HANDBOOK FOR MODEL-MAKERS.
By R. C. ANDERSON. London: Percival Marshall and Co. Ltd. $6\frac{1}{2} \times 9\frac{1}{2}$
inches; illustrated. Price 25s. net.

The author explains in the preface that this is a modified edition of *The Rigging of Ships in the Days of the Spritsail Topmast, 1600–1720*, which he published in 1927. The period covered is the same. The chief difference of the new book from the former is that, except for occasional references, foreign practices are not described. The author's reason for the omission is that nine out of ten English-speaking model-makers prefer to reproduce English ships. Though comparison with foreign practices must always be interesting, the book gains something by the limitation. Less information is available for foreign ships, excepting perhaps the Dutch, than for English, and with its scope limited to a process of development, which in spite of gaps is well recorded, the book is as near complete as such a work ever can be.

To compare it with what may be called the previous edition: it contains 143 against 271 pages, apart from index, etc. All the nine plates are new, except two showing the fore and main tops of the *St George* model of 1701 (pl. 19 A and B, in the old edition). The older book had fourteen plates showing English rigging out of a total of twenty-four. The high cost of reproduction may be the reason for the smaller number in the new book.

One could wish that plate 24 of the former edition had been retained, because it showed a ship of 1720 with spritsail topmast and jibboom. It is like a well-authenticated ghost story, evidence of what otherwise would be incredible. However, the author does not fail to comment on a combination that must have increased the flow of bad language on quarter-deck and fore-castle, and have given recurring extra work for the carpenter and sailmaker. Instead, in addition to the nine plates, there is a large, beautifully clear, folding drawing of the contemporary model of the *St George* of 1701. The drawing is by Mr L. A. Pritchard, M.I.N.A.

A source of information not available for the older book is a model of a 70-gun ship of 1692 belonging to the Earl of Pembroke, who kindly allowed photographs to be taken and reproduced. Though in disrepair after more than 200 years, it had, mercifully, not been 'restored'. It was repaired by Dr R. C. Anderson. His book shows how well-equipped he was for the task and how difficult the job must have been.

Perusal of inventories and works on seamanship can make a student think that he knows something, but if he contemplates rigging a model he quickly discovers what a short way his book-

knowledge carries him. He comes up against such things as the relative dimensions of spars and ropes, the proper places for belaying each piece of running gear and the shape appropriate to the period of blocks, deadeyes, hearts, and the like. Dr Anderson deals with all such things. Everything down to cleats and blocks is carefully described and illustrated by 282 clear outline drawings which leave no doubt of what is to be conveyed. Changes are traced through almost every decade. If the author has not been able to pin the first use of a fitting or the change of shape of a deadeye or the like to a date he says so. The only loose end seems to be that we are not told or shown how the lower end of the spritsail topmast was secured when the knee against which it stood was flush with the end of the bowsprit. Rigs other than that of the ship are not described.

The chapter headings indicate the order and range of the book: I, The Lower Masts and Bowsprit; II, Trestle-trees, Cross-trees, Tops and Caps; III, Topmasts, Topgallants and Flag-staffs; IV, Yards and Stunsail Booms; V, Fittings on the Hull (viz. channels, knightheads, bits, cleats and belaying pins); VI, Standing Rigging; VII-X, Running Rigging (taken mast by mast); XI, Staysail and Stunsail gear; XII, Sails. Ground tackle and steering gear are not described.

There is one not very important but tantalizing omission: we are not told how masthead flags were flown. Pictures and models show them close to their staves and trucks. Sometimes they have hoops or grommets. Aubin's *Dictionnaire* of 1736 shows these clearly, except on a Spanish flag which is secured by bow-knots, but there is never a sign of a halyard.

Two misdirections need correcting. After the description of English and Dutch methods of attaching the blocks to the lower brace-pendants, with a reference to fig. 130 (between pp. 74 and 75) for an unusual way in the model of the *St George* of 1701, the figure is found to show the Dutch practice, a stopper-knot of some kind at the end of the pendant which is rove through an eye in the strop of the block that takes the fall. On p. 114 the lead of the spritsail braces 'finally through a block on the fore-stay', should read 'main-stay', and this is confirmed by fig. 213.

The index, though short, is almost completely adequate. 'Garnet' and 'winding tackle' can be found only by turning to the pages given under 'Tackles, Masthead', and 'Knaveline' by looking at the description of Parrels. Dead-blocks, described on p. 84, are not indexed. On the other hand, 'Mouse' and 'Mainstay' are given separately and so are 'Horses' and 'Footropes'. One word, 'Gallows', is not on p. 42, as indicated, but is named with fig. 42 in the list opposite p. 44.

The author never forgets that he is writing for model-makers. He describes and illustrates a simple invention of his own for making miniature ropes. From his experience he can recommend methods which would not be used in a real ship, e.g. setting up the catharpins before getting the futtock rigging taut. Here and there he tells how an appearance can be faked, in raising a mouse, for instance, or in using sections of plastic knitting needles for the thimbles of bowlines. Especially in the chapter on sails he has the model-maker in mind.

Those who can scarcely imagine the skill and application required for making a model will find plenty to enjoy. Though obviously technical knowledge is required for it the book is pleasantly readable because so clear. It tells what is unknown as well as what is known. For instance, we learn that there is no evidence of how a 'made mast' was constructed till almost the end of the eighteenth century. Certain points are useful for dating: in the mid-seventeenth century there was a vogue for very long spritsail yards. Especially useful are the positions of the channels, which till 1702 were below the middle-deck guns. Bobstays, which one would think must have been found essential, seem to have been almost unknown in English ships before 1690, and it was not till 1706 that bowsprit shrouds were ordered by the Navy Board.

One gets an impression that the seventeenth-century seaman was weak in mechanics. How else account for what the author rightly calls the ridiculous lead of the fore topgallant stay to the head of the spritsail topmast, which of course had no stay, to counteract the aftward pull? We know from contemporary evidence that boatswains liked their ships to show full of small lines, some of them about as useful as the carving on the quarter gallery for their respective functions.

Dr Anderson gives us plenty to think about. His readers will look at models and pictures with new eyes. In short, his book is a masterpiece to be compared with Steele and D'Arcy Lever, but they wrote of their own time while Dr Anderson illuminates a past age.

ALAN MOORE

UNION-CASTLE CHRONICLE 1853-1953. By MARISCHAL MURRAY. London, Cape Town, New York: Longmans, Green and Co. $6\frac{1}{2} \times 9\frac{1}{2}$ inches; 392 pages; illustrated. Price 21s.

This is an excellent piece of work, a real contribution to British maritime history. The well-written story tells the history of the first 100 years of the Union-Castle Line, first as two rivals and later—since 1900 when Sir Donald Currie, founder of the Castle Line, brought about their successful amalgamation—as one. It is a big story, and it is a big book. The story begins in 1853, with an account of something of the coal 'crisis' of that year, when industrial growth—then as now—was outstripping the capacity even of the rich British fields to keep it supplied with coal. Coal used then to be hauled round the coasts of Britain entirely under sail. Rail transport of coal was very expensive and little used. In 1852 the first steam-propelled collier, a little vessel named the *John Bowes*, was put into service. That enterprising spirit Arthur Anderson, noting the success of the *John Bowes*, conceived the idea of establishing a line of steam colliers to bring coal for the large mail steamers based on Southampton and, in this way, the Union Steam Collier Company was born, with Anderson as its first chairman. From hauling coals with a fleet of five little ships which averaged about 165 ft. in length and 24 ft. beam, the new company rapidly developed into cargo liners on longer trades, the vessels serving which had been withdrawn for naval and transport service in the Crimean War. Some of the company's ships were engaged in the service to the Crimea itself but, at the end of that war, the company was left with six ships, and the original employment intended for them was no longer available. So they launched briefly into the Brazilian trade, becoming the Union Steam Ship Company Limited in the process. The Rio trade did not pay the small steamships, in competition with the Royal Mail Steam Packet Line, and there followed a few lean years during which some of the ships were chartered to other owners, and some experimented with more or less abortive services, such as between Birkenhead and Hamburg. Towards the end of 1857, the Union Company secured the new Royal Mail contract to carry mails to the Cape. Instead of running a line of colliers to fetch coal for the big mail packets out of Southampton, the company had joined that select and imposing group itself. From those beginnings, it grew and prospered, with the great Dominion it did so much to serve. The first voyage was made by the small steamer *Dane* which carried only six passengers and a freight of general cargo which earned £102. From that has grown the service which is now able to advertise the sailing of a great, fast, and magnificently appointed liner from Southampton for the Cape, every Thursday afternoon at 4 o'clock.

To make all this possible was not easy. There was the inevitable period of fierce competition, mainly with the Castle Line: and there were wars. The story of the Union-Castle Line in the Second World War would alone make a splendid book. The facts are all here, and stirring and impressive facts they are. Altogether, *Union-Castle Chronicle* is a book to be strongly recommended to all who have a real interest in the story of the British Merchant Navy and of ships and shipping, or of the story of the Union of South Africa. There are 150 illustrations, several of them in fine colour reproduction, and all excellently chosen and presented.

ALAN VILLIERS

UP FUNNEL, DOWN SCREW! THE STORY OF THE NAVAL ENGINEER. By GEOFFREY PENN, Commander Royal Navy. $8\frac{3}{4} \times 5\frac{3}{4}$ inches; 184 pages; 18 illustrations. Price 16s.

Recently two changes have been made in the regulations affecting the Engineer Officers of Her Majesty's Fleet: first, that the purple between the gold lace showing the officer's rank, is no longer to be worn; and secondly, that in future Engineer Officers shall be called and addressed on all occasions by their military rank only and not as heretofore Engineer Commander, say, or Commander (E).

Now these two facts will not be found in *Up Funnel, Down Screw!* for the simple reason that the book was in the Press before they were promulgated, but almost everything else that refers in any way to the history of the Engineer Officers of the Royal Navy is in this most interesting book. There is no necessity for the reader to have any knowledge of marine engineering to enjoy this work, there are very few technicalities and the few that do exist are thoroughly explained.

The author starts from the inception of the branch when those first taken in were rated as civilians and brings his story right up to 1954. Through the intervening years Commander Penn traces the ups and downs, though mostly ups, of this once much despised and disliked branch; the early entrants had a very hard row to hoe, as nearly every man's hand in the Service was against them, and it was some years before the engineer was anything better than an engine minder or driver, who was not even capable of doing the most minor of repairs. But gradually the prejudice against steam and the accompanying dirt, see the frontispiece, was overcome and the engineer became a fully commissioned wardroom officer and thus the way was laid open for fully trained professional men to make a career for themselves in the Royal Navy, until to-day the officer in charge of the engines and machinery of one of Her Majesty's ships, in some cases, cannot be distinguished by his uniform or the mode of addressing him from the officer in command of the same ship. No such complete history of the progress of the engineer officers of the Fleet has ever been written before, and this is a first-class addition to books about the Service. It would be very interesting if officers of other branches would produce equally stimulating and well-written histories.

The branch, which Professor Michael Lewis has called 'The Cuckoo in the Nest', has certainly succeeded in establishing itself and securing a good corner of the nest though without throwing out any of the existing and older inhabitants. How it has all been done is the theme of this very well written and informative book, which should be read by all naval officers and those interested in Her Majesty's Sea Service.

H. O. HILL

DE SCHEPEN BIJ PIETER BRUEGEL DE OUDE. By O. BUYSSENS.

In this article in the *Medelingen der Academie van Marine van Belgie* the author has tried to identify the ships in Bruegel's well-known series of prints, or rather to assign them to their various types and nationalities. He points out that Van Bastelaer, in his study of all Bruegel's prints, distinguished only two kinds of vessel, the galley and the 'nef de bande', and remarks that he can find no authority for the latter expression. This may be so, but the meaning is obvious, a 'broad-side ship' as opposed to a galley, which fought end-on.

The first print to be considered is the view of the Straits of Messina with a sea-fight in progress. This Mr BuysSENS insists must have taken place in 1552, though he admits that contemporary historians do not mention it. In the foreground are two square-rigged vessels with round bows devoid of the normal overhanging forecastle of the carrack, but with a small galley-fashion beak low down. One he considers to be a Turk, the other a Spaniard. This type is repeated in plate 105 of Van Bastelaer's book or plate 2 of the present study. Mr Morton Nance discussed it in the *M.M.* in 1912 (p. 97), and came to the conclusion that it must be a 'hulk'. He acknowledged that this was largely guesswork, but pointed out that an exactly similar vessel shown in one of a set of prints of the Armada campaign—not, by the way, Adam's charts, but a set attributed to Visscher—had on her main topsail the figure of a saint with a diagonal cross and the letters 'S. AND'. This, he argued, must be intended for a portrait of the *Santo Andres*, one of the 'armada de urcas' or 'squadron of hulks'. The fact that this ship was obviously 'cribbed' from Bruegel does not invalidate the argument, because the later artist may very well have copied the best representation of a hulk available.

Mr BuysSENS, having already decided that the sea-fight print was based on personal observation and that one of the two 'sea-monsters' shown there is Turkish, dismisses the 'hulk' theory on the grounds that vessels of that type were seldom seen so far from home as Sicily and that he has never heard of one on the Turkish side. He asks: 'What type of large armed sailing ship of unusual

shape was employed by both Christians and Turks?' and answers: 'The *mahona*, which the Spaniards called a *galeass*.'

There was at one time some dispute between Mr Nance and myself as to what a mahona was like. I think I proved that by the middle of the seventeenth century the Turkish mahona and the Venetian galeass were almost identical (1919, p. 59), and it seems that Mr Buysens believes that this was the case 100 years earlier. This may well have been so, but I cannot agree that it would be right to call these 'sea-monsters' by either name. We know fairly well what Venetian galeasses were like in 1571 or Spaniards in 1583, and it is impossible to believe that the same name can have been applied to vessels so completely different in almost every way only about 20 years earlier. Whatever these ships of Bruegel's may be, they are neither galeasses nor mahonas.

The rest of Mr Buysens's 'identifications' are less open to doubt, but he seems to me to go a little too far in attempting to deduce the size of the ship in his plate 7 (Bastelaer 102) from that of her crew. It is surely most unlikely that a ship of only 145 tons, as he estimates her, would have had 4 masts and carry at least 20 guns on the broadside at three or more levels.

One other point may be worth mentioning. Mr Buysens described the two vessels with cockbilled yards in plate 10 (Bastelaer 104) as apparently sister ships, but has not noticed that they are in all probability bow and stern views of the same ship as is shown broadside-on in plate 8 (Bastelaer 103). Mr Nance pointed this out in the introduction to his *Sailing Ship Models* and suggested at the same time that these three drawings were made from a model.

R. C. ANDERSON

MARISTA TERMINARO. By KOMANDANTO PETER CLISSOLD. *Universala Esperanto-Asocio*. 1955. $6\frac{1}{2} \times 5\frac{1}{2}$ inches; 62 pages; 8 illustrations. Price not stated.

This 'Sailors' Vocabulary' provides, in no more than 62 pages, an astonishing exposition of the possibilities of the Esperanto international language as applied to marine affairs. Many diagrams, clearly—and correctly—executed, show the names of vessels of all kinds and of all parts of those vessels. A glossary provides equivalents of the terms used in the text in English, French, German and Spanish. With this exception, the entire book is in Esperanto; and yet this reviewer, who has not learned that tongue, has been able to read the whole and understand the greater part without difficulty.

Is it feasible to apply Esperanto as a universal medium of communication at sea? Nowhere else, surely, is there a greater need for some such medium; and the special advantage presented by Esperanto over all other claimants lies in the ease with which it can be acquired. Derived from the principal European languages and thus offering much that is familiar to all in its vocabulary, it dispenses with all complexities of grammar. There are few rules, no exceptions and no irregularities. Spelling is phonetic and pronunciation easy.

But most people are not willing—and make the excuse that they not able—to learn any language but their own. Yet—are sailors really so dumb?

T. GERMAIN

SHIPWRECK AND EMPIRE. BEING AN ACCOUNT OF PORTUGUESE MARITIME DISASTERS IN A CENTURY OF DECLINE. By JAMES DUFFY. Harvard University Press (London: Cumberlege). 1955. $5\frac{1}{2} \times 8\frac{1}{2}$ inches. Price 32s. net.

This book is a critical discussion of a collection of the narratives of the disasters which befell various Portuguese East-Indiamen (and in one case a Brazil ship) between 1550 and 1650. Most of them were originally published contemporaneously with the events they describe, in limited editions which were soon exhausted and are nowadays exceedingly rare. They were first published in a collected form by a literary hack named Bernardo Gomes de Brito, who issued twelve narratives in two volumes under the title of *Historia Tragico-Maritima* (*Tragic History of the Sea*)

at Lisbon in 1735-6. A third volume, with no separate title-page, containing another six or seven narratives, was issued shortly afterwards without any indication of the date and place of publication. The contents of this third volume (which is much rarer than the other two) sometimes differ between one copy and another, nor is it certain that Gomes de Brito was responsible for its production. The original relations were usually the work of survivors, and they are nearly all clearly, movingly and simply written. Gomes de Brito sometimes took minor liberties with the wording of his originals, but on the whole his edition (including the third volume) is a creditable piece of eighteenth-century book production. The first two volumes include shipwrecks and maritime disasters dating from the loss of the great galleon *São João* off the coast of Natal in 1552, down to the capture of the *Santiago* by the Dutch off Saint Helena in 1602. The third volume usually contains reprints of six narratives originally published between 1625 and 1651, but sometimes includes one or more original eighteenth-century relation. The great majority of the eighteen shipwrecks discussed in this book occurred off the coast of Natal, and the survivors tried to march overland to the Portuguese posts at Sofala and Mozambique. Although Mr Duffy does not say so, some of these accounts give a very graphic and detailed picture of the Bantu tribes in South-east Africa, and are thus of great interest to modern historians and anthropologists concerned with that region, as readers of G. McCall Theal's historical works on South Africa will recall.

Mr Duffy has a preliminary chapter on the expansion of the Portuguese empire in the sixteenth-century which can safely be skipped by anyone with any knowledge of the subject. He next discusses each of the eighteen narratives which went to make up the eighteenth-century compilation, and this section contains many shrewd and penetrating observations. He points out that most modern Portuguese writers (and others in their wake) gratuitously assume that the *Historia Tragico-Maritima* illustrates 'a limitless devotion to the cause of country and religion and a willingness to sacrifice one's life for kingdom and fellow-man' (p. 47). In point of fact, as he brings out, most of the narratives, which are nothing if not candid, show rather the seamy side of human nature. These wrecks were usually accompanied by scenes of panic, selfishness, greed and violence; and the subsequent overland treks to Mozambique were frequently marked by incompetence among the leaders and indiscipline among their followers. But there was never, as Mr Duffy duly notes, a single case of mutiny against the Crown. In this respect, the traditional Portuguese loyalty emerges unscathed from the author's scathing strictures on Portuguese conduct in times of crisis. Mr Duffy does not add that people of other nations sometimes behaved with similar barbarous selfishness on such occasions. For example, after the Dutch East-Indiaman *Arnhem* had foundered in the Indian Ocean in 1662, thirteen men were flung overboard to lighten the ship's boat, despite the protests of the *predikant*. The tradition of the captain being the last to leave the sinking ship is of comparatively recent origin, and in the sixteenth-century it was a case of 'officers and gentlemen first' rather than women and children.

The reasons for the loss of so many Portuguese East-Indiamen, when homeward-bound off the Natal coast, are perfectly obvious and were frequently stated by contemporary writers. Wrecks on the outward voyage to Goa, when the great carracks were relatively lightly laden (soldiers and specie being the bulk of the exports from Portugal), were much less frequent. The numerous casualties on the return voyage were mainly due to persistent over-loading and inefficient stowage of the cargo, and to the superficial careening carried out at Goa. Contributory causes were the unseaworthy nature of the top-heavy four-decked carracks, the shortage of trained pilots and sailors, and the stubborn ignorance of gentlemen commanders. The Crown repeatedly legislated against these and other abuses (such as leaving Lisbon or Goa too late in the season), but this eminently sensible legislation was only spasmodically enforced. Everyone from captain-major to cabin-boy was interested in cramming the ship with as many spices, textiles, and other Asian goods as she could possibly hold; and the system of *liberdades* (equivalent to the Dutch and English 'private trade') tended to encourage overloading. Mr Duffy estimates that nearly 130 ships were lost on the *carreira da India*, or round voyage between Lisbon and Goa, between 1550 and 1650. After discussing the ships and their characteristics (chap. 3), Mr Duffy does the same for their passengers and crew (in chap. 4). Other chapters deal successively with 'the voyage', 'the wreck', and 'the march'.

This book contains much curious and interesting information, especially for those who cannot read Portuguese. It was originally written as a doctoral thesis, and still contains a fair crop of errors which eluded the vigilance of the examiners. For example, the eighteenth-century reproductions of the shipwreck narratives of 1625–51, did *not* (as stated on p. 39) reproduce the exact title-pages of the original seventeenth-century editions. Mr Duffy seriously misrepresents the position about the temporary withdrawal of the sailors' *liberdades* (p. 75), and on p. 95 he misquotes Faria y Sousa. Reference to the Spanish original (*Asia Portuguesa*, Vol. III, p. 367) discloses that the aphorism 'The last day of February is early and the first day of March is late', was applied to ships leaving Lisbon for Goa (and not vice-versa as Duffy states). The *Madre de Deus*, wrecked in 1594, was lost on the voyage from Goa and not, as stated on p. 130, when outward bound from Lisbon. The *Santiago*, captured by the Dutch in 1602, did not sink off Fernão de Noronha as alleged on p. 189, but was carried as a prize into Holland.

Like all previous commentators on the *Historia Tragico-Maritima*, Mr Duffy has failed to notice that the narrative of the loss of the *Aguia* and *Garca* in 1559–60 is taken from Diogo do Couto's *Decada VII*, without acknowledgement and with only minor changes of wording. The description of the city of Columbo which Gomes de Brito arbitrarily annexed to this narrative, is not by an unknown Jesuit, as Mr Duffy alleges, but by the celebrated Indologist, Manuel Barradas, S.J., who wrote it in 1613–14. Mr Duffy also errs in stating (p. 31) that Henrique Dias's account of the loss of the *São Paulo* off Sumatra in 1561 was first printed in 1735. Admittedly, the first edition of 1565 is exceedingly rare, the only recorded copy being that listed in Maggs Bros. Catalogue 452 of 1924, the present whereabouts of which is not known to me. The notes are inconveniently placed at the end, and 32s. seems rather a high price to pay for a book of less than 200 pages with no illustrations and only one sketch-map.

C. R. BOXER

THE FOUR-MASTED BARQUE. By EDWARD BOWNESS. Published by PERCIVAL MARSHALL and Co., London. 6 × 9¼ inches; 128 pages; illustrated. Price 9s. 6d.

Probably few people would say that the four-masted barque was the most handsome of the big square-rigged vessels, but she was the final type in the evolution of the large sailing ship, and it is for this reason that Mr Bowness has chosen to describe this particular rig so fully. He not only writes about the hull, sails and rigging, but goes into all the details of the ship such as the deck fittings, including the position of, and the easiest way to make, the miniature meat-safe. From this it may be seen that the author has done his best to ensure that the model-maker's path shall be as easy as possible in obtaining complete accuracy.

Though primarily written for the amateur builder of model ships, this book could be of great value to anyone wishing to study the sails, rigging and hull form of a four-masted barque. There are many photographs of the various vessels of this rig, as well as numerous detail ones with deck and mast views, also many drawings. These photographs and drawings will help both the model-maker and the student to understand the general appearance as well as the finer points of one of these big sailing ships, which are now so few that many people have no chance of seeing one and so must rely on books, such as this, to tell them what they want to know. As well as showing what the finished model should look like, the author also says how this finish may be obtained, what is the best material to be used, the best way of working it, and gives many tips to get over the making of difficult and intricate bits of rigging and complicated fittings. In fact this book will be of great use to any ship model-maker, not only to one who wants to make a four-masted barque, but to one who wishes to make, in miniature, a vessel of almost any rig; there are so many good ideas that everyone interested in the construction of models will find many things from which he will derive great benefit.

H. O. HILL

PHARAOH TO FAROUK. By H. WOOD JARVIS with assistance from WALTER W. SKEAT, M.A., F.S.A. London: John Murray, Albemarle Street, W 1. $6 \times 9\frac{1}{4}$ inches. 300 pages.

The author of this timely and spacious summary is already well known through his *Let the Great Story be told*, a Study in British Expansion, illustrating by examples General Gordon's dictum that our Empire was not created by Governments but by 'Adventurers': using that word in the Elizabethan sense of voluntary service and independent initiative. Mr Jarvis's latest work (which we hear is already being reprinted in the third week after its début), is the result of twenty years' experience in Egypt, and of lifelong familiarity with the contents of many a historical library.

An Elizabethan compiler of the first printed Catalogue of English Books, Andrew Maunsell (A.D. 1595), defined his aim as being to delight the learned and inform the unlearned. Mr Jarvis does both. And the more familiar we happen to be with certain of the outstanding events, the more we shall appreciate the concentration, precision, swiftness, and acumen with which the author embodies what our forebears would have called 'the causes that governed the events'. Whether he is analysing the controversies which still surround the battle of Actium, or recapitulating the reasons why the battle of Aboukir had such far-reaching results, we notice his capacity for entering into the feelings of men of action. There is nothing in him of the patronizing attitude of 'those in their soft chairs at home, playing fast and loose with them that venture their lives abroad': rashly 'constituting themselves judges of danger which they fear, and honour which they understand not'.

Mr Jarvis's discriminating judgement is exercised so unostentatiously, that we hardly think of the author until the book is closed. Whether he is depicting the superb magnificence and limitless power of the early Pharaohs, or leading us through the tangle of events so recent as to be written within living memory, whether he is considering Julius Caesar allured by the wiles of Cleopatra, or compelling us to share the long-spun-out anguish of Gordon during the fatal siege of Khartoum, his economy of words produces an effect more impressive than eloquence.

Anyone so unregenerate as not to care for history should read *Pharaoh to Farouk* for its human interest. But though no didactic purpose is emphasized, we can hardly avoid seeing how desirable it is to understand the past if we are wisely to confront the future.

To produce a book at the same time popular and scholastic is a feat the difficulties of which are best understood by those who also have attempted that arduous form of service *pro utilitate hominum*.

Foreseeing that *Pharaoh to Farouk* will continue to be in demand, may we plead for a map? or a series of maps such as those in Major-General Fuller's *Decisive Battles of the Western World*, which Mr Jarvis shows signs of having studied.

This reviewer refrains from quotation, because where every page is of interest, and the story despite its vast diversity is an organic whole, a paragraph or two as an example of matter and manner would be like offering some drops of water as samples of the Blue and the White Nile.

Now that disputes between Egypt and the Sudan are our daily fare in the morning papers, it would be helpful if Mr Jarvis—having given us a bird's-eye view of Egypt across many thousand centuries—would concentrate on a popular History of the Anglo-Egyptian Sudan. Now that the Sudanese are claiming the perilous privilege of 'independence', they may well be reminded that Khartoum, as it now is, was transformed by the Royal Engineers from a heap of plague-stricken ruins; and that Port Sudan and Erkowit are of entirely British design and creation. English officials are departing from the Sudan, perhaps for ever. But they leave behind them the Gordon Memorial College—of Lord Kitchener's devising—also many another monument of the 'tenacity, serenity, and faith' of which British officers in the Egyptain Army were the incarnation. We need not rate the Sudanese so low as to assume that they will be entirely ungrateful.

E. M. TENISON

Vol. 10 onwards, at 10s. 6d. each (postage 5d.). Indexes will be supplied free to purchasers of complete volumes or sold separately for 2s. each.

Details of back numbers available will be supplied on request. (Published by the Cambridge University Press, 200 Euston Road, London, N.W. 1.)

The following other publications of the Society are at present available for sale:

OCCASIONAL PUBLICATIONS: No. 5, *Lists of Men-of-War, 1650-1700. Part I. English Ships.* Compiled by R. C. Anderson. *Part II. French Ships.* Compiled by Pierre Le Conte. *Part III. Swedish Ships.* Compiled by Hj. Börjeson. *Danish-Norwegian Ships.* Compiled by P. Holck. *German Ships.* Compiled by W. Vogel and H. Szymanski. *Part IV. Ships of the United Netherlands.* Compiled by A. Vreugdenhil. *Part V. Indexes.* EACH PART 2s. 6d. (POSTAGE 3d.)

REPRINTS: *The Rye River Barges*, by Leopold A. Vidler.

East Cornish Luggers, by H. O. Hill.

The Fishing Luggers of Hastings, Parts I and II (separately), by James Hornell.

The World's First Clipper, by Boyd Cable.

The Monuments in the Church of St Nicholas, Deptford, by John Summerson.

The North Ferriby Boats, by E. V. Wright and C. W. Wright.

The Battle of Trafalgar, by Rear-Admiral A. H. Taylor. Price 5s.

MARITIME MISCELLANY SERIES, No. 1, *The Van de Veldes*, by W. Voorbeytel Cannenburg.

No. 2, *Piracy*, by Philip Gosse. Price 2s.

No. 3, *The Anchor*, by J. W. van Nouhuys.

No. 4, *Old Maritime Prints*, by A. G. H. Macpherson.

No. 5, *The Timber Problem of the Royal Navy, 1652-1862*, by Robert G. Albion. Price 2s.

No. 6, *The Fighting Ship from 1860 to 1890*, by Admiral G. A. Ballard.

No. 7, *The King's Flags*, by Cecil King.

No. 8, *The History of Maritime Law*, by William Senior. Price 2s.

No. 9, *The Development of Signalling in the Royal Navy*, by Captain L. E. Holland, R.N.

No. 10, *The Ship of the Renaissance*, by R. Morton Nance. Price 5s.

(Each, price 2s. 6d. except where otherwise stated.)

PLANS: Model-maker's Plans of the *Victory*, 10 plans on 3 sheets from those used in the restoration of 1923-35. (Price 21s.)

Enquiries for any of these should be addressed to The Hon. Secretary, Society for Nautical Research, National Maritime Museum, Greenwich, S.E. 10.

FOUDROYANT COMMITTEE

ADMIRAL SIR CLEMENT MOODY, K.C.B.
(Chairman)

THE ADMIRAL SUPERINTENDENT, H.M. DOCKYARD,
PORTSMOUTH (ex officio)

R. C. ANDERSON, Litt.D., F.S.A. (ex officio)

E. G. BARNARD, M.A.

CAPTAIN R. S. CLEMENT BROWN, R.A.
(Hon. Secretary and Treasurer)

F. G. G. CARR, C.B.E., M.A., LL.B. (Vice-Chairman)

R. DE BUNSEN, M.A.

CAPTAIN H. M. DENHAM, C.M.G., R.N.

RICHARD DIMBLEBY, O.B.E.

J. P. M. ELLIS, M.A.

C. S. FORESTER

DAME FLORENCE HANCOCK, D.B.E.

COMMODORE R. L. F. HUBBARD, R.D., R.N.R.

INSTR. CAPTAIN T. E. JACKSON, R.N.

PROFESSOR MICHAEL A. LEWIS, C.B.E.,
F.R.HIST.S. (ex officio)

J. C. V. LOVATT

THE MAYOR OF GOSPORT (ex officio)

LT-COMMANDER G. P. B. NAISH, R.N.V.R.,
(ex officio)

ADMIRAL SIR PERCY NOBLE, C.B.E., K.C.B.,
C.V.O.

VICE-ADMIRAL H. G. NORMAN, C.B., C.B.E.

MISS JOSEPHA SMITH

VICE-ADMIRAL SIR GILBERT STEPHENSON,
K.B.E., C.B., C.M.G.

LADY STIRLING-HAMILTON

WING COMMANDER H. G. TAYLOR

LIEUT-COLONEL HAROLD WYLLIE, O.B.E.

MRS HAROLD WYLLIE

THE SOCIETY FOR NAUTICAL RESEARCH

PATRON

ADMIRAL THE RT HON. THE EARL MOUNTBATTEN OF BURMA, K.G., P.C.,
G.C.S.I., G.C.I.E., G.C.V.O., K.C.B., D.S.O.

PRESIDENT

R. C. ANDERSON, Litt.D., F.S.A.

CHAIRMAN

PROFESSOR MICHAEL A. LEWIS, C.B.E., F.R.Hist.S.

HONORARY VICE-PRESIDENTS

THE RT HON. THE EARL STANHOPE, K.G., D.S.O., M.C.	ADMIRAL SIR GEORGE HOPE, K.C.B., K.C.M.G.
SIR BRUCE INGRAM, Kt., O.B.E., M.C.	ADMIRAL OF THE FLEET THE EARL OF CORK AND ORRERY, G.C.B., G.C.V.O.
R. MORTON NANCE	

VICE-PRESIDENTS

ADMIRAL SIR AUBREY SMITH, K.C.V.O., K.B.E., C.B.	LIEUT-COLONEL HAROLD WYLLIE, O.B.E.
SIR ALAN MOORE, Bt., M.B.	CAPTAIN H. T. A. BOSANQUET, C.V.O., R.N., F.S.A.
ALAN J. VILLIERS, D.S.C., F.R.G.S.	GREGORY ROBINSON, D.S.C.

COUNCIL

PROFESSOR C. R. BOXER (1952)	NORMAN A. OUGH (1955)
PROFESSOR J. G. BULLOCKE (1954)	DR OSCAR PARKES, O.B.E., M.B. (1953)
F. G. G. CARR, C.B.E., M.A., LL.B. (1953)	CAPTAIN C. B. SANDERS, C.B.E., V.R.D., R.N.V.R. (Ret.) (1954)
R. DE BUNSEN (1955)	R. A. SKELTON, F.S.A. (1955)
ENGR.-COMDR. H. O. HILL, R.N. (1955)	REAR-ADMIRAL HUGH TAYLOR, C.B., O.B.E. (1952)
ENGR.-REAR-ADMIRAL R. C. HUGILL, C.B., M.V.O., O.B.E. (1955)	E. K. TIMINGS, M.A. (1952)
BASIL LAVIS (1955)	OLIVER WARNER (1955)
EDGAR J. MARCH (1953)	CAPTAIN R. S. CLEMENT BROWN, R.A. (<i>ex officio</i>)
COMMANDER HILARY P. MEAD, R.N. (1953)	

TRUSTEES

E. W. BOVILL, F.S.A.	REAR-ADMIRAL HENRY G. THURSFIELD, F.S.A.
CAPTAIN (S) A. F. COOPER, C.B.E., R.N.	

PUBLICATIONS COMMITTEE

EDWARD BOWNESS
JOHN EHRLMAN, M.A.
R. A. SKELTON, F.S.A.
E. K. TIMINGS, M.A.

PHOTOGRAPHIC RECORDS COMMITTEE

ALAN J. VILLIERS, D.S.C., F.R.G.S.
(*Chairman*)
ENGINEER-COMMANDER H. OLIVER HILL,
R.N. (*Secretary*)
MICHAEL S. ROBINSON
BASIL GREENHILL

BANKERS

COUTTS & CO.
WESTMINSTER BANK LIMITED

AUDITOR

W. H. LACEY (*Chartered Accountant*)

HON. SECRETARY

GEORGE P. B. NAISH
NATIONAL MARITIME MUSEUM, S.E. 10

HON. TREASURER

R. LOWEN, M.B.E.
NATIONAL MARITIME MUSEUM, S.E. 10

HON. EDITOR

G. R. G. WORCESTER,
PENNY COTTAGE,
POUND LANE,
WINDLESHAM,
SURREY.

FOUDROYANT COMMITTEE. See previous page.